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ABSTRACT

This report examines the second phase of a longitudinal impact study of the Sixth Cycle Teacher Corps. Phase 1 focused on the relationship of intern background and Teacher Corps Program characteristics to intern exit characteristics. Its goals were to: (a) contrast teacher performance and pupil gains of graduates with those of control group teachers; (b) analyze the relationship of teacher background, teacher education program, teacher performance, and pupil performance for the graduates; and (c) assess the effects of professional support which graduates and controls receive. The 84 subjects taught grades 2-6 in self-contained classrooms. Data about teacher and pupil performance were obtained through a classroom observation guide, teacher questionnaire, data, standardized reading test, and standardized self-concept scale. Graduates were superior to controls in developing ethically relevant curricula, using community resources and initiating contact with parents, and developing positive attitudes about reading development and the causes of poverty in society. Graduates facilitated greater self-concept development in pupils, but there was no significant difference in reading gains between the two groups. The consistent pattern of relationship between pupil variables and Teacher Program characteristics suggests that teacher training makes a difference on pupil behavior and on related teacher performance. (Author/HMD)

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FINAL REPORT

Phase II

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A STUDY OF THE EFFECTIVENESS OF SIXTH-CYCLE TEACHER CORPS GRADUATES

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Berkeley, California

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The research reported herein was performed pursuant to a contract with the Office of Education, U.S. Department of Health, Education, and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Office of Education position or policy.

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I. INTRODUCTION

A. Overview

This report describes the methodology and findings of the second year of a two year study of Teacher Corps, a teacher training program funded by the U.S. Office of Education. The first year (Phase I) of the study focused on identifying and analyzing those combinations of intern background characteristics and Teacher Corps program characteristics that were related to desired teaching skills and attitudes of interns at the end of their training. The results of the first year's study were published under separate cover but are summarized in Section I-C of this report for the convenience of the reader.[1]

The second year (Phase II) of the study assessed the effectiveness of Teacher Corps graduates in working with low-income/minority group children. Graduates of Sixth-Cycle Teacher Corps projects were first year teachers during the 1973-74 school year. Eighty-four of these graduates were available for inclusion in the second year study. These were teachers who taught in grades 2-6 in school districts that would allow PTTA to administer reading and self-concept tests to pupils. Moreover, these were graduates who taught reading to the same children over the entire school year. In order to answer some of the research questions, these graduates were matched with other young teachers in the same school district who taught the same type of child at the same grade level.

A reading achievement and a self-concept test were administered to all pupils in the fall and spring of the 1973-74 school year. Additional variables such as the extent of pupil initiated comments were measured by classroom observation in the spring of 1974. At the same time, pupil attendance data were obtained from school records.

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[1] David D. Marsh, et al., A Study of Teacher Training at Sixth-Cycle Teacher Corps Projects, 3 vols. Berkeley, Calif., Pacific Training and Technical Assistance Corporation, 1974.

Data about teacher performance were obtained by means of classroom observation and a questionnaire. In the spring of 1974, each teacher was observed on four separate occasions. The teacher answered a questionnaire pertaining to the teacher's utilization of community resources, action as a change agent in the school and activities in lesson planning and materials development.

The goals for the second year of the study were:

1. To contrast the teacher performance and pupil learning gains of Teacher Corps graduates with those of control group teachers.
2. To analyze the relationship of teacher background, teacher education program, teacher performance and pupil performance for the Teacher Corps graduates.
3. To assess the effects of the professional support which Teacher Corps graduates and controls receive upon their teacher performance and effectiveness.
4. To compare Teacher Corps graduates included in Phase II with all graduates of projects studied in Phase I.

The research questions related to each of these goals are presented in Section II.

B. Teacher Corps As An Innovative Teacher Education Program

Teacher Corps was created by Title V-B of the Higher Education Act of 1965.[2] It was amended and extended for three years on June 29, 1967, amended again April, 1970, and again in the Education Amendments of 1972. Section 511 of this Act stated that the legislative mandates of Teacher Corps are:

1. "To strengthen the educational opportunities available to children in areas having concentrations of low-income families," and

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[2] This section is presented as a convenience to readers who are not already familiar with Teacher Corps. Readers familiar with Teacher Corps and the findings from Phase I of the study may want to skip to Section II of the report.

2. "To encourage colleges and universities to broaden their programs of teacher preparation" and that these purposes would be accomplished by "attracting and training qualified teachers who will be made available to local educational agencies for teaching in such areas and attracting and training inexperienced teacher-interns who will be made available for teaching and inservice training to local educational agencies in such areas in teams led by an experienced teacher."

As part of its first legislative mandate, Teacher Corps had had many accomplishments. This is seen in improved curricula, e.g., in the inclusion of programs that will have meaning for different ethnic groups; in the improvement of parent-school relations; in positive changes in the school's ability to relate to minority-group children; and in improved instructional programs. For example, individualized instruction, team teaching, and learning centers are becoming integrated into the instructional program of many of the schools in which interns have been working, and interns can likely be expected to bring their experiences with these kinds of learning situations to the new schools in which they find positions.

With regard to its second mandate, to broaden teacher preparation programs, Teacher Corps has also had many accomplishments. One is the promotion of institutional change within the school of education of the cooperating institution of higher education (IHE). Changes brought about by Teacher Corps include changes in staff, in programs, and in administrative operations. Teacher Corps has helped in the staff development of current faculty members and has helped recruit new faculty whose skills and interests closely relate to Teacher Corps goals. Teacher Corps has sought to make the curriculum more relevant to the needs of low-income and minority-group children and to improve the teacher training process through the implementation of competency-based teacher education and multi-cultural education. Teacher Corps has also influenced administrative operations such as the grading system and the reorganization of courses into instructional modules.

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There are approximately 85 Teacher Corps projects across the country at the time of this study. Each project has approximately 30 interns who are inexperienced teachers preparing for initial certification as teachers.

Teacher Corps projects differ from typical teacher training programs in several ways. Teacher Corps interns are predominantly from minority groups and are in training for two years. During the two years, an intern works in the public school for 60 percent of each week, often on a cooperative team (master teachers and interns) which not only conducts the instruction of pupils but also engages in the development of innovative curricula. By means of the team structure, interns are enabled to receive intensive training and counseling.

At Teacher Corps projects, the university courses are taught at or near the schools where interns teach and are designed to relate more closely to the intern's daily teaching experience. Many of the IHE courses are organized around specified teacher competencies and allow interns to learn at their own pace. These are aspects of a general concept, competency-based teacher education, which projects have tried to implement. As Teacher Corps projects have defined competency-based teacher education, it has meant:

- The specification of teacher competencies in the program-- the extent to which the project has specified teacher competencies and corresponding assessment criteria.
- The individualization and personalization of the program-- the extent to which the project provided for differing learning rates and styles and the extent to which trainees could share in decisions about the kind of training they would receive as well as support of their growth as persons.

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- The field-centeredness of the program--the extent to which the instruction of interns took place in school or community settings and related to the realities of these situations.

- The use of systems design and empirical data in the program--the extent to which the training program is systematic in integrating curriculum elements and is data-dependent both in monitoring intern progress and in program performance.

Teacher Corps has been a national leader in the competency-based teacher education movement.

Projects have also emphasized multi-cultural education as part of the teacher education given interns. Interns at certain projects had to learn Spanish or were required to be fluent in Spanish as a requirement for admission to the program. All projects have taught interns special instructional techniques designed for use with low-income or minority group children and have emphasized cross-cultural awareness as an important attitude for interns. Interns also spent 20 percent of their time in the target community in an effort to better understand and relate to the broader needs of the children they serve.

C. A Summary of the First Year of the Study

The purpose of the first year (Phase I) of this study was to identify and analyze those combinations of intern background characteristics and Teacher Corps program characteristics that were related to desired teaching skills and attitudes of interns at the end of their training. During the first year, data were collected at 20 Sixth-Cycle Teacher Corps projects. The 20 projects represented all projects that prepared elementary school teachers between 1971-73. Data about the training program at each site were obtained by interview and questionnaire from eleven role groups involved in each project, e.g., team leaders, school principals, and IHE personnel. Data about the intern teaching characteristics were obtained from a 50 percent stratified random sample of interns (sample n=369). All data about the Teacher Corps program and the teaching characteristics of interns were gathered in the spring of the second year of training. No comparisons were made with comparable groups of teachers in non-Teacher Corps training programs.

Information about the teaching characteristics of interns was gathered in several ways. Each intern was observed three times by a PTTA representative trained in the use of our classroom observation instruments. To complement the perspective provided by classroom observation, each intern completed a log of his/her professional activities over a week's time. An interview with the intern about activities in the log provided information about how the intern prepared lessons, diagnosed pupil needs and evaluated pupil performance. Additional information was gathered from interns and their team leader by means of several questionnaires.

The findings were organized as follows:

- Correlations among Teacher Corps program factors.
- Correlations among intern teaching performance measures.
- Analyses of the relationship of intern background, Teacher Corps program and intern teacher performance measures.

1. Correlations Among Teacher Corps Program Factors

The following were judged to be the most important correlations among program factors:

- Positive attitudes about the Teacher Corps held by School of Education (IHE) personnel were directly related to the number of years that a Teacher Corps project had been in operation at the university (r=.48). Positive attitudes, however, were inversely related to the extent to which the cooperating teachers participated in the overall design of the project (r=.45).

- The extent to which a variety of groups and methods were used to specify teacher competencies was directly related to the degree of participation by cooperating teachers in the overall program (r=.53); the extent to which interns were exposed to innovative teaching (r=.50); and the interns' feelings of having been supported by the school staff (r=.50).

- The follow-up of the interns' academic instruction in the school setting was directly related to the extent to which the cooperating teacher participated in the overall design of the project and agreed with the project's goals (r=.57) and the extent of cooperative decision-making at the project as seen by the principal (r=.44).

- The extent that competencies were used in training interns was inversely related to the extent that interns felt they could be self-directed within the project (r=-.60).

- The size of the school district was inversely related (r=-.47) to the intern's opportunity to bring about change in the school.

- The level of public school staff support for the interns' involvement in the community was inversely related to the proportion of low-income pupils in the school district (r=-.63).

It was also found that an intern tended to feel accepted in a project that featured cross-cultural awareness and sensitivity training.

2. Correlations Among Intern Teaching Performance Measures

Among intern teacher performance measures the following was important:

- The extent that interns bring about change in the school and perceive this type of change as being important was inversely related to the amount of intern-initiated contact with parents (r=-.57) and to a pattern of classroom interaction where children initiated the interaction (r=-.47).

In addition, a pattern of correlation among intern teacher performance measures suggested the following prototypes of interns:

Intern-Prototype A	Intern-Prototype B
• Introduced culturally relevant materials	• Focused on academic topics
• Did not use a lesson plan	• Used group lesson planning
• Did not use corrective feedback	• Used corrective feedback
• Did not allow pupils to explore classroom and select work groups	• Allowed pupils to explore classroom and select work groups

An unusual feature of the relationships among intern teaching skills discussed above is the negative correlations among some of the

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variables. This finding implies that interns who excelled in one aspect of teaching performed with less than average skill on some other aspect of teaching and suggests that Teacher Corps projects must decide which set of teaching skills they wish to maximize.

3. Analysis of the Relationships Among Intern Background Characteristics, Teacher Corps Program Characteristics and Intern Teacher Performance Measures

The findings for the analysis of the relationship between intern background, Teacher Corps program and intern teacher performance measures are organized around five research questions used in Phase I.

Question 1: Are there any important trends in the program or background characteristics that are most associated with the intern teacher performance variables?

An analysis of correlations between program training characteristics and intern teaching skills revealed that 19 program training characteristics of a total of 65 studied were found to be somewhat related to at least one intern teaching skill or attitude for all interns. These program training characteristics included collaborative decision-making, common knowledge of and agreement with project goals, extensive revision of formal coursework taken at institutions linked with each project, extensive clinical supervision given interns, extensive intern involvement in the community served by the school, and a personalized Teacher Corps program wherein interns believe they can be self-directed.

None of the intern background characteristics were significantly related to intern teaching skills or attitudes for all interns. This is an important finding because it reveals that none of the background characteristics (excluding ethnicity) were closely related to the teaching skills of interns. Intern teaching skills were only related to training program characteristics.

Question 2: What is the strength of relationship between background and program characteristics as related to individual intern teacher performance characteristics?

Multiple linear regression was used to assess the strength of relationship between the nineteen program factors and the intern teacher performance characteristics. Of the 22 teaching skills or attitudes studied, only three were closely related to the training program factors. These three were all intern attitudes about why some children are poor readers or why some persons in the society are economically poor. These attitudes are hypothesized to be related to teacher effectiveness. The strength of relationship between training program characteristics and intern teaching skills is weak across all interns.

Question 3: Are the strengths of relationship between background and training program characteristics as related to intern teaching skills or attitudes different for black, chicano and white interns?

For black, chicano, and white interns studied separately, there were discernible patterns of relationship between intern background and Teacher Corps program characteristics as these related to intern teaching skills. This finding suggests the importance of tailoring the training program according to the intern's ethnic group.

Question 4: Do graduate and undergraduate projects differ on any of the background or training program characteristics most associated with differences in intern teaching skills or attitudes?

In general, undergraduate projects were superior on the training program characteristics that were most associated with the intern's teaching skills and attitudes. Undergraduate projects had a better team leader to intern ratio and had team leaders who possessed considerably more teaching experience in low income/minority group

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schools. Undergraduate interns received more of their course credit in courses taught by minority group professors and worked in public schools with a higher percentage of black staff.

There was no substantial difference between graduate and undergraduate programs in the extent to which courses given interns were revised. This is an unexpected finding. It would seem that graduate projects had considerably more flexibility to revise the Teacher Corps curriculum. Graduate programs had fewer required courses and presumably had more mature students so that it might have been easier to institute more innovative courses.

Graduate interns did tend to feel they could be self-directed in all aspects of the training program including interpretation of the intern's teaching role. The graduate interns tended to operate as independent teachers in the public school setting.

Both the university involvement and the public school staff's support of the community component were higher at undergraduate projects. This difference, however, was not associated with either the number of hours per week the intern worked in the community or with the diversity of activities an intern engaged in while involved in the community component.

Question 5: Do intern teaching skill levels vary by ethnic group or by whether the project was a graduate or undergraduate project?

There was little difference between groups of interns in terms of their perception of the importance of bringing about change in the school. Similarly there was little difference between groups of interns in terms of the extent to which they introduced ethnically relevant curriculum in the public school. The lack of differences among these variables is somewhat surprising since it was anticipated that minority group members would introduce a greater amount of new curricula.

Across ethnic groups, graduate interns were decidedly more likely to give pupils instructional choices than were undergraduates.

There are five conclusions which should be emphasized:

- For all interns, intern background and Teacher Corps program characteristics were not good predictors of intern teaching skills. Stated differently, the relationship of intern background and Teacher Corps program characteristics to intern teaching skills and attitudes was not very strong across all interns.
- To the extent that intern background and Teacher Corps program characteristics were related to intern teaching skills and attitudes, it was the Teacher Corps program characteristics rather than the intern's background characteristics that were most closely associated with intern teaching skills at the end of his/her training.
- The sets of program characteristics that were most closely associated with intern teaching skills pertained to a) the pattern of collaborative decision-making, b) the degree of program integration (e.g., follow-up of coursework in public school setting), c) the degree of personalization of the program for interns, and d) the community component for interns.
- The extent to which teacher competencies were specified and used by the project was not closely related to any intern teaching skill. Other aspects of competency-based teacher education, however, were among the best predictors of intern teaching skills. An example of which is the effect of collaborative decision-making discussed above.

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- For black, chicano or white interns studied separately, there were some discernible patterns of relationship between intern background, Teacher Corps program characteristics and intern teaching skills and attitudes. For example, the community component of the training program, for chicano and white interns, was directly related to the ability of these interns to communicate effectively with pupils. Such a relationship did not hold for black interns.

These conclusions are discussed in the Phase I Final Report.

II. METHODOLOGY FOR THE STUDY

A. Selection of Teacher Corps Graduates and Control Teachers

Criteria for the selection of Teacher Corps graduates were implied by the goals for Phase II of the study. The goals for Phase II were:

1. To contrast teacher performance and pupil learning and growth gains of Teacher Corps graduates with those of control group teachers.
2. To analyze the relationship between teacher background, teacher education program, teacher performance and pupil performance for Teacher Corps graduates.
3. To assess the effects of the professional support which Teacher Corps graduates and controls receive upon their teacher performance and effectiveness.
4. To compare Teacher Corps graduates included in Phase II with all graduates of projects studied in Phase I.

These goals suggested the need to compare Teacher Corps graduates with other young teachers and to relate graduates' teacher performance and effectiveness to the training they received as interns. The goals also limited the scope of Phase II to an analysis of graduates' effectiveness as classroom teachers.

Several constraints limited the number of Teacher Corps graduates available for inclusion in Phase II of the study. These constraints were:

1. Many graduates obtained teaching jobs where their role was not one of a traditional elementary school teacher:

some taught only remedial math; some taught only Spanish for either Anglo or Spanish-surnamed children. The diversity of teaching roles meant that some Teacher Corps graduates did not have:

a. sufficient contact with one group of children to support the assumption that they alone had a measurable impact on each child, or

b. sufficient similarity in the curricula they were to teach to allow a common set of evaluation criteria to be used.

2. Some school districts refused to allow outside evaluators to test elementary school children. Unfortunately, two districts with the largest number of desired Teacher Corps graduates refused to allow testing. In all, six districts with approximately sixty otherwise acceptable graduates took this position.

Given these constraints, the sample for Phase II included any graduate of Sixth-Cycle who met the following criteria:

- The person graduated from one of the 20 projects in Phase I.
- The person was teaching in a public school in a school district that would permit the study.
- The person was teaching in Grades 2-6.
- The person was teaching an identified group of at least seven children for the whole year and for at least forty percent of the typical school day; and that the graduate was the sole teacher of reading for these children.

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Graduates not teaching in grades 2-6 were eliminated for several reasons. Teachers of children in grade one were excluded because children in this grade need to have tests individually administered to them and because their gain scores are fairly unstable. Teachers of junior high school age pupils were excluded because there were only a few of these teachers who were otherwise eligible and because these teachers added too many new variables to the study.

The last criterion was included to insure that it was the Teacher Corps graduate who was actually influencing his/her respective pupils. A group of at least seven pupils was needed to provide a sufficiently accurate estimate of change in pupil behavior. The graduate needed to work with these children for 40 percent of the typical school day over the whole year so as to make the pre-test, post-test design feasible and to insure that a child's self-concept change was attributable to the teacher in question. Since reading gain was to be assessed, it was important that the graduate be the sole teacher of reading for these children. The use of a teacher aide did not exclude the graduate; however, a team teaching approach to the teaching of reading (where several teachers taught any one child during the year) did result in the exclusion of that graduate from the study. There was no acceptable way to partial out the effects of various teachers upon any pupil or set of pupils.

In comparing the Teacher Corps graduates with other young teachers, it was important to be able to control other variables that might be related to pupil achievement. Other variables that were controlled were:

Pupil Variables

1. Grade in school
2. Pupil's socioeconomic status

Teacher Variables

1. Years of experience as teacher
2. Teacher ethnicity

Context Variables

1. Geographic location of school

2. School environment (support which young teacher receives)

Each Teacher Corps graduate in the Phase II study was matched with a control group teacher so as to rule out as many of these alternative explanations of pupil achievement as possible. In addition, the data analysis was conducted so as to partial out the effect of some of these variables.

Control group teachers were selected only after they met the following criteria:

1. The teacher had to be teaching the same grade level as his/her matching Teacher Corps graduate.

2. The teacher had to be teaching pupils who have approximately the same socioeconomic background.

3. The teacher had to be teaching in the same school district.

4. The teacher had to have no more than three years of teaching experience.

5. The teacher had to be teaching an identified group of at least seven children for the whole year and for at least 40 percent of the typical school day. Moreover, the teacher had to be the sole teacher of reading for these children.

In many cases, it was possible to find a control teacher that was a better match for the Teacher Corps graduate than the basic selection criteria required. Where possible, the following additional conditions were met:

1. The control teacher was a first year teacher.

2. The control was of the same ethnic group as the Teacher Corps graduate.

3. The control and the Teacher Corps graduate taught at the same school.

Due to changes in the teacher employment pattern, these preferred conditions could not be met in all cases. Some districts hired only Teacher Corps graduates and thus, controls had to be chosen from second and third year teachers. In two cases Teacher Corps graduates had to be dropped from Phase II because no suitable control could be found within the same school district.

B. Selection of Variables and Instruments

1. Teacher Performance Variables and Instruments

During the first year of the study, seven training goals were identified which the 20 Teacher Corps projects held in common. For each goal, a set of 3-6 specific variables were identified, and corresponding measures of these variables were either developed or adapted for use in the study.

An initial step in the first year's data analysis was the simplification of the teacher performance data by means of factor analysis. Data pertaining to each of the seven training goals were included in a separate factor analysis. The result was the creation of 34 teacher performance factors which were used in analyzing the relationship of intern background characteristics and Teacher Corps program characteristics to intern teacher performance characteristics. An example of a teacher performance factor is presented in Figure 1. The empirical relationship of the original variables to the factor is expressed by the loading of that variable on the factor. Conceptually, the loading is similar to a correlation coefficient.

(Factor) EX5.2 Diversity of Instructional Modes Used in Classroom

	Loading*	Variable Name
(First Variable)	.961	Number of hours per week intern uses the instructional strategies of: discussion, verbal interaction; pupil reading or working with work book, learning packet, writing activities, etc.; pupil listening to record, watching film, slides, etc.
(Second Variable)	.825	Number of hours per week intern uses the instructional strategy of discussion, verbal interaction.
(Third Variable)	.795	Number of hours per week intern uses the instructional strategy of pupil reading or working with work book, learning packet, writing activities, etc.
(Fourth Variable)	.693	Number of hours per week for all academic curriculum.
(Fifth Variable)	.619	Number of hours per week intern uses the instructional strategy of pupil listening to record, watching film, slides, etc.
(Sixth Variable)	.512	Number of hours per week for all instructional activities.

*Depicts relationship of variable to entire factor. A loading of .961 is similar to a very strong positive correlation of .961 between the variable and the entire factor.

Figure 1

An Example Of An Intern Teacher Performance Factor And The Variables That Loaded On It.

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In preparation for the collection of teacher performance data in Phase II, the teacher performance factors from Phase I were examined by the project staff. For each teacher performance factor developed in Phase I, an individual variable was identified which loaded heavily on that factor. For example, from Figure 1 it can be seen that the variable "Number of Hours Per Week Using (All) Instructional Stragegies" is highly related, empirically, to the factor "Diversity of Instructional Modes Used in Classroom." In Phase II, the individual variable was used as a substitute for the entire factor, hence greatly simplifying the data collection and analysis.

Some factors from Phase I were not used in the Phase II data collection. In some cases, data critical to the construction of that factor came from Teacher Corps team leaders. No suitable role group could replace the team leaders and thereby provide the needed data in the Phase II data collection. In other cases, the factor was excluded because it was a duplicate of another factor.

The teacher performance variables used in Phase II are presented in Figure 2. The variables have been organized under new headings in order to clarify their meaning. Two data collection instruments were used in Phase II: a Teacher Questionnaire and The SRI Classroom Observation Guide. Figure 2 also lists which of these two instruments were used in obtaining data on each variable.

Teacher Performance Variables		Phase II Data Source
Utilization of Community Resources		
TP1	Teacher utilizes school and community resources	Teacher Questionnaire (Q7)
TP2	Teacher initiates contact with parents	Teacher Questionnaire (Q6)
Action As Change Agent in the School		
TP3	Teacher perception of importance of bringing about change in the school	Teacher Questionnaire
TP4	Teacher practice of bringing about change in the school	Teacher Questionnaire (Q4)
Lesson Planning and Materials Development		
TP5	Teacher introduces culturally relevant new curriculum	Teacher Questionnaire (Q5)
TP6	Teacher plans lesson with teaching team	Teacher Questionnaire (Q1-col. 27,28)
TP7	Extent of all materials development and lesson planning by teacher	Teacher Questionnaire (Q1-col. 25,26 plus 27-28 plus 29-30)
Classroom Performance:		
Affective Tone		
TP8	Extent of teacher/pupil interaction	SRI Observation Guide
TP9	Extent of positive teacher behavior	SRI Observation Guide
TP10	Range of teacher positive and negative behavior	SRI Observation Guide

Figure 2

Teacher Performance Variables Used In Phase II

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Teacher Performance Variables		Phase II Data Source
Classroom Performance: Questioning and Structuring Strategies		
TP11	Teacher asks open-ended questions	SRI Observation Guide
TP12	Teacher is highly directive in structuring discussion and class	SRI Observation Guide
Classroom Performance: Teacher Response Strategies		
TP13	Teacher gives acknowledgement	SRI Observation Guide
TP 4	Teacher gives praise	SRI Observation Guide
TP15	Teacher gives corrective feed-back in academic area	SRI Observation Guide
Classroom Performance: Individualization and Personalization of Instruction		
TP16	Degree that instructional choices are given to pupils	Teacher Questionnaire (Q2)
TP17	Extent that pupils work independently or in small groups	SRI Observation Guide
Classroom Performance: Academic/Non-Academic Focus of Instruction		
TP18	Attention given to academic subjects	Teacher Questionnaire (Q1)

Figure 2 (con't.)

Teacher Performance Variables		Phase II Data Source
TP19	Attention given to reading instruction	Teacher Questionnaire (Q1)
TP20	Extent of attention given to social and general (non-academic) discussion in class	SRI Observation Guide
TP21	Extent of attention given to pupil behavior problems	SRI Observation Guide
Perception of Problems Related to Schooling		
T22	Teacher perceives reading difficulties of pupils as due to teacher	Teacher Questionnaire (Q8)
TP23	Teacher perceives poverty as due to society at large	Teacher Questionnaire (Q9)

Figure 2 (con't.)

Several teacher performance variables need further explanation. Teacher acknowledgement (TP13) indicates that a child's response is recognized or agreed with. Another form of acknowledgement is to repeat the child's statement immediately. Some examples of teacher acknowledgements are:[3]

- Nodding (nonverbal) to indicate the painting is acceptable.
- "Yes, that's the right way to knead clay."
- "That math problem is correct."
- "Thank you for sitting down when I asked you."
- "What do you think is in this bag, Peter?"
  "I think it's a carrot."
  "You think it's a carrot."

Teacher praise (TP14) involves praise of the child's response. Some examples are:[4]

- "What a pretty picture you've made!"
- "I like the story you wrote about your trip Jim."
- "You've done a fine job on your math workbook."
- "I'm really proud of you, class, for behaving so well while Mr. Jones was here."

Both teacher acknowledgement and teacher praise are responses to either a child's academic or social behavior.

Two teacher performance variables relate to a teacher's perceptions of problems related to schooling. The variable "teacher perceives reading difficulties of pupils as due to teacher" (TP22) is a variable which measures the teacher's sense of locus of control about pupils' reading development. A high score on TP22 would reflect a teacher who believes he/she has a great deal of control over a pupil's reading development. Such a teacher would agree with statements that reading difficulties are due to:

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[3] Stanford Research Institute Classroom Observation Instrument Home Training Kit. Menlo Park, Stanford Research Institute, 1973.

[4] Ibid.

- How much teacher preparation goes into a reading lesson.
- How much creativity the teacher has.
- The ability of the teacher to communicate with her students.

A low score on TP22 would reflect a teacher who believes the control of reading development is external to the teacher. Such a teacher would see reading development as due to the student or the student's environment and would agree with statements that reading difficulties are due to:

- How much the student cares about learning to read.
- The socioeconomic background of the student.

This variable provides the opportunity to explore the relationship of teacher locus of control to pupil reading gains.

TP22 was measured using an 18 item Likert scale developed by Vasquez for an evaluation of the National Right to Read Program.[5] A factor analysis of data from the Right to Read study revealed strong inter-item correlations for the six "internal to teacher" and the six "internal to student" items. The other six items explained poor reading development as a function of the student's environment or luck. These items are defined as external to the teacher's control.

The variable TP23 explores a teacher's attitude about the causes of poverty. This variable, like the assessment of reading difficulties described above, taps the teacher's sense of locus of control. The scale was developed by Dr. Joseph Feagin.[6] The teacher may see poverty as due to efforts of the individual, hence, would agree with statements that poverty is due to:

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[5] See James A. Vasquez. The Relationship of Teacher Locus of Control to Teacher Characteristics and Student Reading Gains. Unpublished Ph.D. dissertation, UCLA, 1973.

- Lack of effort by the poor themselves.
- Lack of ability and talent among poor people.
- Lack of thrift and proper money management by poor people.

Conversely, a teacher may see poverty as due to society rather than the individual. Such a teacher would have a high score on TP23 and would agree that poverty was due to:

- Low wages in some businesses and industries.
- Failure of society to provide good schools for many Americans.
- Prejudice and discrimination against poor people.
- Failure of private industry to provide enough jobs.

Many Teacher Corps projects promoted this latter perspective for viewing poverty. The relationship of this variable to pupil learning and growth is described in later sections of this report.

In addition to the individual teacher performance variables (TP1-TP23), the analysis of teacher performance utilized clusters of teacher performance variables (STP1-STP7). Scores for these teacher performance clusters were derived by adding the scores of specified teacher performance variables, once the individual teacher performance variables had been rescaled, so that all variables could range from 0 to 100.

The teacher performance clusters are presented in Figure 3.

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[6] Joseph R. Feagin, "Poverty: We Still Believe that God Helps Those Who Help Themselves," Psychology Today, 6. November, 1972, p. 101-110.

Teacher Performance Clusters		Variables that Combine to Form the Clusters	
STP1	Utilization of Community Resources	TP1	Teacher utilizes school and community resources
		TP2	Teacher initiates contact with parents
STP2	Action as a Change Agent in the School	TP3	Teacher perception of importance of bringing about change in the school
		TP4	Teacher practice of bringing about change in the school
STP3	Lesson Planning and Materials Development	TP5	Teacher introduces culturally relevant new curriculum
		TP6	Teacher plans lesson with teaching team
		TP7	Extent of all materials development and lesson planning by teacher
STP4	Classroom Performance: Affective Tone	TP8	Extent of teacher/pupil interaction
		TP9	Extent of positive teacher behavior
		TP10	Range of teacher positive and negative behavior

Figure 3

Clusters of Teacher Performance
Variables Used in Phase II

Teacher Performance Clusters		Variables that Combine to Form the Clusters	
STP5	Classroom Performance: Teacher Response Strategies	TP13	Teacher gives acknowledgement
		TP14	Teacher gives praise
		TP15	Teacher gives corrective feedback in academic area
STP6	Individualization of Instruction	TP16	Degree that instructional choices are given to pupils
		TP17	Extent that pupils work independently or in small groups
STP7	Perception of Problems Related to Schooling	TP23	Teacher perceives poverty as due to society at large

Figure 3

Clusters of Teacher Performance Variables Used in Phase II

The reader should note that not all 23 teacher performance variables are subsumed under one of the teacher performance clusters listed in Figure 3. This is because the teacher performance variables within other potential teacher performance clusters dealt with opposite types of behavior. For example, under Classroom Performance: Questioning and Structuring Strategies in Figure 2 are two variables. These variables are:

- Teacher asks open-ended questions.
- Teacher is highly directive in structuring discussion and class.

These variables were not combined to form a cluster score.

Data on teacher performance were gathered by means of two instruments: The Teacher Questionnaire and The SRI Classroom Observation Guide. The Teacher Questionnaire obtained information about the teacher's utilization of community resources, action as a change agent, development of new curriculum materials, and perceptions of problems related to schooling. Except for the two attitude tests, the questions were developed specifically for this study.

The SRI Classroom Observation Guide was developed by Dr. Jane Stallings as part of an evaluation of Project Follow Through.[7] Most of the data used in this study come from a section of the guide known as the five - minute - observation (FMO).

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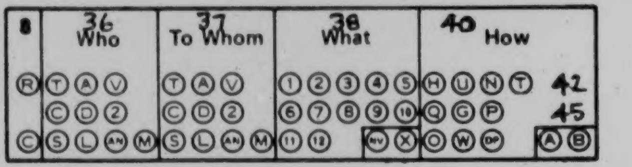
[7] Jane Stallings and David Kaskowitz, Follow Through Classroom Observation Evaluation 1972-1973. Menlo Park, Stanford Research Institute, 1974.

The FMO provides a record of the interaction between teacher and pupils over a five minute period of time. The interaction is recorded on a series of frames, an example of which is shown below.


8
36 Who
37 To Whom
38 What
40 How
R T A V T A V 1 2 3 4 5 H U N T 42
C D 2 C D 2 6 7 8 9 10 Q G P 45
C S L AN M S L AN M 11 12 NV X O W DP A B

Each frame provides data that could be expressed as an interaction sentence: Who, To Whom, What and How. The Who column contains eight codes that refer to a person or a group of persons, plus a code for animals and a code for machines. These codes identify the initiator or perpetrator of the action. In the sentence metaphor, the Who codes are the subject of the sentence.

The next column, the To Whom column, is comprised of the same ten codes as the Who column. In the interaction sentence, the codes in this column are the objects of the action, the person to whom a statement or action is directed. One code is marked in the Who column and one code in the To Whom column of each frame; no more than one code may be recorded.

The What column contains twelve codes which are categories of actions or behaviors. Some examples are: Direct Question, Response, Praise, Waiting and Observing. These codes are the verbs of the interaction sentence. Only one of the twelve What codes is coded in one frame.

In addition to these twelve codes, two other codes appear in the What column. These are Nonverbal (NV) and Movement (X). These may be coded, when appropriate, with one of the twelve What codes.

The twelve How Column codes are modifiers of the What codes. They add information about the action, describing content or affect.

These codes act as adverbs in the interaction sentence. As many How codes as are appropriate may be coded.

2. Pupil Variables and Instruments

Pupil variables were used as indicators of teacher effectiveness in this study. The pupil variables covered the general areas of:

- Reading gain
- Self-concept gain
- School attendance
- Pattern of pupils' classroom interaction.

In selecting the general areas of pupil growth, several considerations prevailed:

1. The need to balance an emphasis on achievement with an emphasis on attitudinal growth for pupils. Hence, the inclusion of self-concept, attendance and classroom interaction data.

2. The need to balance paper and pencil testing with observations of pupil behavior and the use of unobtrusive measures.

3. The need to identify pupil growth areas judged to be important by the U. S. Office of Education and by teachers.

4. The need to identify pupil growth areas that were sought by all teachers and where a common set of measures would fairly assess pupil growth.

5. The need to utilize pupil growth variables that first year teachers could reasonably be expected to influence. Of special importance here was the belief held by some consultants that first year teachers could not reasonably be expected to influence reading gains.

Different role groups that had input into the selection of these areas of pupil growth desired different sets of pupil variables. The final selection of areas of pupil growth was an attempt to serve this broad set of desires.

The selection of the four areas of pupil growth variables was followed by the selection of specific variables and corresponding measures within each area of pupil growth. In selecting the reading achievement test, PTTA worked closely with Dr. Ralph Hoepfner of the Center for the Study of Evaluation at U.C.L.A. The selection of the reading test was done in the following steps:

1. A list of possible reading objectives was drawn up.
2. A selected group of teachers of inner-city children rated each reading objective in terms of (a) how much emphasis it received in their classroom, and (b) in what grades such subject matter was taught.
3. A set of criteria for test selection were identified based on the special needs of the study. The criteria were:[8]
    - How thoroughly does the test assess each objective?
    - Is there evidence for the test's construct, concurrent and predictive validity?
    - Are the instruments and items appropriate for the age level of the student?
    - Is the test format (layout, timing, illustration, pacing) appropriate for the students?
    - Is the recording of answers simple for the students (especially critical at grade 2)?

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[8] Taken from Ralph Hoepfner, et al., Elementary School Test Evaluation, Los Angeles, Center for the Study of Evaluation, UCLA, 1970.

- Can the test be easily and correctly administered by a non-specialist within the time limit generally thought to be the attention span of the age-group being tested?

- Is the scoring objective and inexpensive?

- Are the norms statistically sound and interpretable?

- Is there evidence of the test's reliability?

- Is the range of coverage of the test adequate so that low achieving students (especially at the pre-test) and high achieving students (especially at the post-test) will be adequately assessed and differentiated?

4. Based on the criteria above, the Metropolitan Achievement Test (MAT) was chosen. The study used the word knowledge, reading and total reading sections of the test.

The Piers - Harris Self Concept Scale was selected for the study as it was the only self-concept Scale appropriate for grade school children which the Center For the Study of Evaluation rated as suitable in a pre-test, post-test research design.[9] Manufacturers of the scale present evidence of the test's reliability and sensitivity.[10] The scale was shown to be sensitive enough to detect gains in self-concept resulting from a specially designed one year school program. These data suggest that the scale could reasonably be expected to assess self-concept gains of pupils taught by the teachers in the study.

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[9] See Ralph Hoepfner, et al., CSE-RBS Test Evaluation: Tests of Higher Order Cognitive, Affective and Interpersonal Skills, Los Angeles, Center for the Study of Evaluation, 1972.

[10] Ellen V. Piers, Manual For the Piers-Harris-Children's Self-Concept Scale, Nashville, Tennessee, Counselor Recordings and Tests.

The scale has 80 items which yield a total self concept score and a score on each of 6 sub-scales derived by factor analysis by the instrument developers. The total self-concept score and the 6 sub-scale scores were all used as pupil variables in the study. Figure 4 presents the 6 sub-scales along with scale items that loaded heavily on each sub-scale in the original factor analysis. The sub-scales, as used in this study, were defined in the manual which accompanied the instrument. For ease in scoring and interpretation, all scales are scored so that the higher the score, the more positive the attribute.

P4	Good Behavior	I do many bad things (-.66); I am obedient at home (.64); I am often in trouble (-.60); I think bad thoughts (-.55); I can be trusted (.53).
P5	School Status	I am good in my schoowork (.66); I am smart (.63); I am dumb about most things (-.56); I am a good reader (.55); I forget what I learn (-.53).
P6	Physical Appearance	I am good looking (.74); I have a pleasant face (.61); I have a bad figure (-.56); I am strong (-.41); I am a leader in games and sports (.40).
P7	Lack of Anxiety	I cry easily (-.57); I worry a lot (-.57); I am often afraid (-.55); I get nervous when the teacher calls on me (-.54); I am nervous (-.49).
P8	Popularity	People pick on me (-.62); I am among the last to be chosen for games (-.61); It is hard for me to make friends (-.56); I have many friends (.55); I feel left out of things (-.49).
P9	Happiness and Satisfaction	I am a happy person (.65); I am unhappy (-.62); I like being the way I am (.60); I wish I were different (-.57); I am cheerful (.42).

Figure 4

The Six Sub-Scales of the Piers-Harris Self-Concept Scale

Pupil variables associated with patterns of pupil behavior in the classroom were drawn from the list of pupil variables which SRI developed for the SRI Classroom Observation Guide. It was decided that variables from the SRI Observation Guide would be used so that previous research on the relationship of teacher performance variables to these pupil variables could be utilized, and so that the data collection could be made more efficient, given the time constraints of the study.

The four pupil variables associated with the SRI Observation Guide are listed below:

- Pupil initiating interaction with teacher (P 12).
- Pupil instructing self or other pupils (P 13).
- Pupil displays happiness or feelings of self-worth (P 14).
- Pupil making task-related comment (P 15).

It was felt that first year teachers could reasonably be expected to bring about classroom change as reflected by these variables.

Figure 5 presents the entire set of pupil variables. These variables pertain to reading gain, self concept gain, school attendance and patterns of pupils' classroom behavior.

Pupil Variables		Phase II Data Source
Reading		
P1	Word knowledge	Metropolitan Achievement Test
P2	Reading Comprehension	Metropolitan Achievement Test
P3	Total reading	Metropolitan Achievement Test
Self-Concept		
P4	Good Behavior	Piers-Harris Self Concept Scale
P5	School Status	Piers-Harris Self Concept Scale
P6	Physical Appearance	Piers-Harris Self Concept Scale
P7	Lack of Anxiety	Piers-Harris Self Concept Scale
P8	Popularity	Piers-Harris Self Concept Scale
P9	Happiness and Satisfaction	Piers-Harris Self Concept Scale
P10	Total self-concept	Piers-Harris Self Concept Scale
Attendance		
P11	Pupil school attendance	School Attendance Records
Classroom Observation Variables		
P12	Pupil initiating interaction with teacher	SRI Classroom Observation Guide
P13	Pupil instructing self or other pupils	SRI Classroom Observation Guide
P14	Pupil displays happiness or feelings of self-worth	SRI Classroom Observation Guide
P15	Pupil making task-related comment	SRI Classroom Observation Guide

Figure 5
Pupil Variables Used in the Study

3. School Climate Variables and Instruments

The school climate variables (SC1-SC4) describe school conditions which may influence the teacher performance and effectiveness of Teacher Corps graduates and control group teachers. The school climate veriables are presented in Figure 6. These data were obtained from teachers on the Teacher Questionnaire.

School Climate Variables	
SC1	Percentage of low-income students at the school.
SC2	Extent to which the teacher receives curriculum materials and ideas from other school staff.
SC3	Degree of similarity of views between teacher and other school staff.
SC4	Extent to which the teacher feels accepted in school setting.

Figure 6
School Climate Variables Used in the Study

The percentage of low-income students in the school (SC1) is defined as the percentage of students from families earning less than $6,000 per year. This figure was chosen by the project staff so as to differentiate low-income from middle-income families. Information for this variable was gathered from the teacher by means of the Teacher Questionnaire.

The extent to which the teacher receives curriculum material and ideas from other school staff assesses the degree that teachers have received help from other teachers and from the principal. This variable is defined as the frequency that this help has been given and represents the teacher's perception of how often assistance occurred. Information was obtained by means of the Teacher Questionnaire.

A third aspect of the school climate is the degree of similarity of views between the teacher and other school staff. Each teacher in the study rated the degree to which his/her views differed from other school staff on the following topics:

- Importance of reading for children.
- Importance of strict discipline for children.
- Importance of ethnic studies for children.
- Importance of rapport with parents.
- Importance of pupil involvement in decisions about instruction.

The variable is defined as the extent of similarity of views across all these educational topics.

The final school climate variable pertains to the extent to which the teacher feels accepted in the school setting. This attitude was tapped using a two item Likert scale.

C. Data Collection Methodology

The study of the effectiveness of Teacher Corps graduates required the collection of data at three points during the 1973-74 school year. Pupils of teachers in the study were given a reading and a self-concept test in the fall and late spring of the school year. In addition, teachers and pupils were observed in their classrooms in the spring. The discussion of the data collection methodology is organized around three topics: the initial contact with teachers and the school district, the administration of tests to pupils, and the classroom observation.

1. The Initial Contact with Teachers and the School District

During the spring of Phase I, interns at all 20 Teacher Corps projects filled out a brief questionnaire which provided information about their plans for the 1973-74 school year and several addresses at which the intern could be contacted. All interns were also given a post-card which they were to send to PTTA once their plans for the 1973-74 school year were finalized. In July, a follow-up letter was sent to interns and they were telephoned, where possible, about their plans. After extensive effort, approximately 150 graduates could not be reached as of August 15, 1974. It is believed that these graduates did not have teaching jobs.

Teacher Corps graduates who had a job in a school district were contacted by letter so that the purpose of Phase II could be explained. At the same time a letter was sent to the superintendent of the school district. This letter explained the purpose and procedures of Phase II and stated that a PTTA staff person would call within a week to:

- obtain permission to conduct the study, and
- obtain the name of a contact person in the district office who could assist PTTA in preparing for the fall data collection.

The contact person was then contacted by letter and telephone. This person was asked to provide the following information:

- Verification that each graduate was actually employed in the district and would be teaching in grades 2 through 6.
- The school to which the graduate had been assigned.
- The general socioeconomic status of pupils in that school.
- The names of all new elementary teachers in the district and the school where they would be teaching (so that a control group teacher could be found).

In some cases, it was possible to complete the process of obtaining permission from the school principal, locating a suitable control teacher, obtaining permission from both Teacher Corps graduates and control group teachers and learning about schedule conflicts at the school by telephone. More typically, this process was completed only after a PTTA staff person had made one or several on-site visits.

2. The Administration of Tests to Pupils

A reading achievement and a self-concept test were administered to pupils in the fall and late spring of the school year. A trained test administrator rather than the regular teacher administered the test. This was done so that:

- The testing time would be uniform.
- The test would be explained to pupils using standardized procedures.
- Testing material would be available and tests could be scanned while on-site.
- Cheating and coaching could be minimized.
- Similar procedures could be used for handling typical disruptions of the testing process.

Test administrators were local persons who had been substitute teachers. They were given 8 hours of training which included the following topics:

- Purpose of the study. The main goals were outlined and questions were answered about the purposes or details of the study.
- Protocol to use in visiting schools. This included the names and addresses of persons to contact in each school.
- Interpersonal relations. This included a discussion of what to say to each person, how to deal with any problems, and how to answer their questions.

- *Setting up testing schedules.* This training included how to confirm the schedule with the teachers, how to prepare for alternative arrangements if plans change, etc.

- *Preparing for the test.* The representatives were given rules to follow in conducting the test, such as preparing the classroom and organizing the materials.

- *How to deal with pupils.* Because representatives all had classroom experience, they did not require special training in how to deal with children, but they did need to know how to give the pupils an explanation of the study.

- *Conducting the test.* Each test was reviewed in detail with the group, including giving the directions for the test. The group members practiced giving directions, conducting the tests, and answering pupils' questions.

- *Scanning the tests.* Instructions were given as to how to scan the test booklets before they were returned. This insured that booklets were complete and answers were properly filled in.

- *Returning materials.* Representatives were given instructions on how to return the materials.

The regular classroom teacher was used as an aide for the testing, consequently, administrators also learned how to explain the duties of the aide to the classroom teacher.

Testing in the fall was conducted over three weeks time during October. There were no more than ten days difference in starting time at any site. The MAT Reading and Piers-Harris Self Concept Scale were given at this time. The spring testing was conducted between April 16 and May 27. In most cases, pupils tested early in the fall were also tested early in the spring so that the number of days between pre- and post-test was almost constant across teachers.

The MAT reading test was divided into two parts. There was a short break of five minutes or less between parts. Directions were read to the pupils by the administrator. Preliminary questions were in English in the manual; however, they were permitted to be given in Spanish where necessary for pupil understanding. After practice sessions were completed, the actual test was conducted only in English, and no further communications were allowed in Spanish. Pupils worked silently and alone during the test. Children with a specific problem during the test raised their hands. The teacher/monitor came to them.

Each item on the Piers-Harris scale was read aloud by the test administrator in English. The item was read twice. Pupils indicated whether they agreed or disagreed with the statement by marking "yes" or "no" on the booklet. Following the recommendation of the scale developers, the Piers-Harris scale was not given to second grade children. Second graders are not able to record their answers correctly in the booklet and have highly unstable opinions about the items.

3. The Classroom Observation

An additional set of data collectors was used to gather the classroom observation data and administer a questionnaire to each teacher. The training of classroom observers was conducted in four sessions lasting nine work days. Most of the observers had worked on previous data-collection efforts for the Teacher Corps study, and many were trained in the SRI observation procedures. The training was conducted by the project staff and by consultants from the Stanford Research Institute (SRI). The training sessions are described below:

- Session 1 -- The purpose of the study was explained to data collectors. They learned what data was to be collected from each teacher and on what time schedule. There was also a review of protocol for data collectors while in schools. Finally, data collectors learned how to complete all travel and payroll forms.

- Session 2 -- In this session, the data collectors examined the Teacher Questionnaire. They were told its purpose, how to administer it, and how to deal with potential problems related to insuring that it was properly filled out.

- Session 3 -- Observers were given 8 hours to study a booklet prepared by SRI as part of the training related to the SRI Classroom Observation Guide. The booklet taught observers the basic codes used in the Observation Guide.

- Session 4 -- All of Session 4 was conducted by SRI personnel. Some of the observers had already learned how to use the SRI Guide, in training for last Spring's Phase I data collection. They needed only a 3-day refresher course taught by SRI. The rest of the observers participated in seven days of training. For either group, the training consisted of drill in increasing coding speed and accuracy and included use of videotaped segments of classroom activity and live classroom observation. All observers met required standards of speed and reliability using procedures developed by SRI. Inter-rater reliability, expressed as the percent of agreement between any two observers was .77.[11]

Each classroom observer was given a master sheet of classrooms to observe.

Upon meeting Teacher Corps graduates and control teachers, the Teacher Questionnaire was delivered. It was completed by the teachers and collected by the observer before leaving the site. At the initial visit, the observer learned when the teacher would be teaching. No specific appointment for observation was set, however, because it was important that the teacher not know exactly when he/she was going to be observed.

Twelve observations were made in each classroom using SRI booklets. Four observations were "teacher focus" and included what the teacher was doing. Teachers could only be observed when they were the only adult working with a particular group of children. Other adults working in the same room were acceptable as long as the teacher in the "teacher focus" could be observed without interaction with other groups.

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[11] This statistic covers only the Who, To Whom and What categories of the observation guide. See Jane Stallings and Phillip A. Giesen, A Study of Confusability of Codes in Observational Measurement. A paper presented at the AERA Annual Meeting, April, 1974.

Eight observations were "child focus" and included what eight different children within the classroom were doing. The eight children could be from several different classes or groups of children as long as they were pupils of the teacher in the "teacher focus" for 40% of the school day. In order to avoid bias in choosing child subjects, random sampling within the classroom was employed.

Observations were limited to those classes where activities were determined to be academic in nature. Special teaching sessions for the observer, show and tell, arts and crafts, movies, outside speakers, a child's twenty minute presentation, or activities outside the classroom were not acceptable activities to observe.

The maximum number of observations on any one day for any one teacher was three teacher focus observations and six child focus observations. A fifteen minute space of time was required between two teacher focus observations of the same teacher. Observers usually completed two teacher focus and four child focus observations in both the morning and the afternoon of a given day. This pattern eliminated bias associated with an individual's morning or afternoon behavior.

D. The Data Analysis Approach

A set of research questions was created for each of the four goals of the study. The analysis procedures used to answer these questions are discussed below.

Goal 1: To contrast the teacher performance and pupil learning and growth gains of Teacher Corps graduates with those of control group teachers.

The issue of comparing Teacher Corps graduates and control teachers was formulated in terms of two research questions.

Question 1: Do Teacher Corps graduates differ from control group teachers across teacher performance measures?

As defined in Section II-B the teacher performance measures TP1 to TP23 and teacher performance clusters STP1 to STP7 describe skills in the areas of:

- utilization of community resources.
- action as change agent in the school.
- lesson planning and materials development.
- classroom performance.
- perception of problems related to schooling.

Similar analyses were performed on the individual variables (TP1 to TP23) and on the seven clustered variables (STP1 to STP7) for teachers of grades 2-3 and for teachers in grades 4-6. This division of teachers was made based on the assumption that teachers of the lower grades show a different pattern of teacher behavior than do teachers of pupils in the upper grades. The findings of this study lend support to this hypothesis.

For the individual variables TP1 to TP23, the Teacher Corps graduates and the control teachers were compared using the technique of one-way multivariate analysis of variance. This technique compared the two groups of teachers across all 23 teacher performance variables taken together, as a whole, and took into account intercorrelations between these variables. It should be mentioned that the technique does not isolate which variables account for differences between the two groups. For this purpose, the two groups of teachers were compared separately on each teacher performance measure (TP1-TP23) and each cluster (STP1-STP-7) using one-way univariate analysis of variance.

Question 2: Do Teacher Corps graduates differ from control group teachers across pupil performance measures?

As defined in Section II-B, the pupil performance measures, P1 to P15, are indicators of the effectiveness of the teachers. Section II-A described procedures used to control for extraneous variables in the selection of Teacher Corps graduates and the control group teachers. The pupil performance variables cover the following areas of pupil growth:

- reading gain.
- self-concept gain.
- school attendance.
- patterns of pupil activity in the classroom.

As above, the two groups of teachers were stratified into grades 2-3 and grades 4-6.

Although it would have been possible to analyze pupil variation within a classroom across all classrooms on variables P1 to P15, the experimental unit under investigation in the study was the teacher rather than the pupil. For this reason, classroom averages of these variables were taken to be the data for the analysis described below.[12]

Comparison of the two groups of teachers on each variable P11-15 was made using univariate analysis of variance as described above. Comparison of the two groups of teachers on the reading and self-concept development of their respective pupils (P1-P10), however, required a different form of analysis. In this situation, the average post-test score for each variable for each class was "adjusted" by the average pre-test score, since inequalities arose in pre-test means. Thus, multiple one-way analysis of covariance was performed with the post-test class mean as the dependent variable, with training as the analysis of variance factor, and with the pre-test class mean as the covariate.

A necessary assumption in the use of analysis of covariance is that the regression slopes of the post-test mean on the pre-test mean for any variable are equal for the two groups of teachers. For each variable where the regression slopes for the two groups of teachers were significantly different, an analysis of variance of mean differences between post-test and pre-test was performed.

Goal 2: To analyze the relationships between teacher background, teacher education program, teacher performance and pupil performance for the Teacher Corps graduates.

The first part of the analysis focused on the relationship between teacher performance variables (TP1 to TP23) and pupil performance variables. For this analysis, only the Teacher Corps graduates were studied because it was desirable to use the same teacher sample and population throughout the analysis for this goal. Extensive teacher training data was not available on control group teachers. The pupil variables P1-P10 were defined as the difference between post-test and pre-test mean scores for this analysis

[12] For further information about this issue, see Robert W. Heath and Mark A. Nielson, The Myth of Performance-Based Teacher Education. Report A73-10. San Francisco, The Far West Laboratory For Educational Research and Development, 1973.

The following questions were answered:

Question 1: What teacher performance measures are most associated with each of the pupil learning and growth measures?

This question was answered by first examining the simple correlation coefficients between teacher performance variables and pupil performance variables, and by then examining a canonical correlation for the two sets of variables. Canonical correlation analysis identified linear combinations of teacher performance variables that were significantly correlated with linear combinations of pupil variables. These linear combinations identified clusters of variables with interesting interpretations.

In addition, this question was explored by performing discriminant analysis using teacher performance measures as independent variables and subgroups of classes defined by four pupil performance variables as dependent variables. Thus, subgroups defined separately for total reading gain (D3), total self-concept gain (D10) and each of two pupil classroom variables (P12 and P13), were generated as follows: For a given pupil performance variable, classroom means were ordered from smallest to largest and divided at the median to form two subgroups. The first subgroup represented the "above-average" subgroup, whereas the other subgroup represented the "below-average" subgroup. The discriminant analysis then identified which teacher performance variables best predicted subgroup membership.

Question 2: What teacher background and education program measures are most associated with the teacher performance measures?

The teacher background characteristics were the sex and ethnic group of the Teacher Corps graduate. The education program variables used were the 75 Teacher Corps program characteristics which were studied in Phase I. The relationship of teacher sex, ethnicity and Teacher Corps program characteristics to the teacher performance variables is the focus of this question.

This relationship was explored in two ways. First, teacher sex and ethnicity, and the Teacher Corps program characteristics of graduates in the Phase II sample were correlated with their teacher performance (TP1 to TP23).

Secondly, discriminant function analysis was performed using sex, ethnicity and Teacher Corps program characteristics as independent variables and subgroups of Teacher Corps graduates as dependent variables. For each teacher performance variable, the graduates were divided into two subgroups, above average and below average, in the manner described in question 1.

Question 3: What teacher background and education program measures are most associated with pupil performance and growth measures?

This question was answered in the same manner as question 2 above: simple correlation and discriminant function analysis.

Goal 3: To assess the effects of the professional support which Teacher Corps graduates and controls receive upon their teacher performance and effectiveness.

The professional support which a teacher receives was analyzed in terms of the four school climate variables (SC1-SC4) as defined in Section II-A above.

Question 1: What is the relationship of professional support which Teacher Corps graduates and controls receive to their teacher performance and effectiveness?

The relationship of school climate variables to teacher performance (TP1-TP23) was assessed by means of simple and canonical correlation. The same procedures were used to assess the relationship between the school climate variables and pupil learning (P1-P15).

Question 2: Do Teacher Corps and control group teachers differ in the amount of professional support they receive?

This question was explored by means of one-way univariate analysis of variance for each school climate variable.

Goal 4: To compare Teacher Corps graduates included in Phase II with all graduates of projects studied in Phase I.

Teacher Corps graduates included in the Phase II sample were compared with all Sixth-Cycle interns included in Phase I. This analysis was done to see if there were overt differences between the Phase II sample and all interns given that the sample was not randomly drawn. The rationale for the selected sample was presented in Section II-A.

Question 1: Are Teacher Corps graduates signficantly different from the universe of Sixth-Cycle Interns in terms of sex, ethnicity and project affiliation?

The two groups were compared in terms of sex, ethnicity and project affiliation. Differences between groups were tested by chi-square analysis.

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E. Constraints

The reader should be aware of several circumstances which influenced the second year of the study. First, only a limited number of Teacher Corps graduates were able to secure teaching jobs. Of those who were able to get jobs, approximately 60 graduates taught in school districts that refused to allow PTTA to test the pupils. An additional number of graduates served as curriculum development specialists or in other roles within the school district which did not fit into the specified research domain for this study. Consequently, the graduates included in the study of teacher effectiveness were not representative of all Sixth-Cycle Teacher Corps graduates nor did they represent all graduates who secured jobs in school districts.

These deficiencies were dealt with in several ways. The graduates included in the study of teacher effectiveness were compared with all graduates to see how the graduates in the sample differed from the universe of Sixth-Cycle graduates. In addition, PTTA will develop case studies of Sixth-Cycle graduates who are playing unique and innovative roles in education. The case studies will be presented in a separate report.

A second constraint in the study was the need to evaluate pupil progress using common criteria of growth and norm-referenced standardized tests to assess this growth. It was not possible to evaluate the growth of pupils in each classroom using any criteria unique to that teacher. This raises the possibility that the criteria weren't directly related to the curriculum goals of teachers. Moreover, the reading test and self concept scale used were norm-referenced, and to some extent culturally biased. There are a number of problems associated with the use of these tests to assess pupil growth.[13] There is reason to believe that the burden of "unfairness" associated with the evaluation criteria and the tests fell with equal severity on Teacher Corps graduates and control teachers.

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[13] See Harvey A. Averch, How Effective is Schooling? A Critical Review and Synthesis of Research Findings, Prepared for the President's Commission on School Finance. Santa Monica, California: The Rand Corp., 1972. and Meredith D. Gall, The Problem of "Student Achievement" in Research on Teacher Effects. Report A73-2 San Francisco, The Far West Laboratory for Educational Research and Development, 1973.

Finally, for financial reasons, the classroom observation for each classroom was limited to what could be accomplished within two days elapsed time. While multiple observations of each teacher and his/her pupils were made, the observations may not be a fully accurate representation of how that teacher and that class typically function.[14]

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[14] Readers seeking further information about this issue are referred to Barak Rosenshine, "The Stability of Teacher Effects Upon Student Achievement" Review of Educational Research, 1970, 40, 647-662.

III. Report of the Findings

A. A Comparison of Teacher Corps Graduates Included in Phase II with the Universe of Sixth-Cycle Interns

In Section II-A it was explained that the Phase II sample of Teacher Corps graduates was not randomly drawn from the universe of Sixth-Cycle Teacher Corps interns due to constraints imposed by the low percentage of teacher education graduates who secured teaching jobs. This section of the report explores the relationship of the Phase II sample to the universe of Sixth-Cycle interns in terms of sex, ethnicity, and project affiliation.

Table 1 presents data on the sex and ethnicity of the Phase II sample and the universe of Phase I interns. The Phase II sample had essentially the same proportion of males and females as did the universe of Sixth-Cycle interns. Moreover, the proportion of black, white, chicano and other graduates in the Phase II sample was not significantly different from the proportions of these groups in the universe of interns. Finally, the Phase II sample was not significantly different from the universe of interns in terms of a sex and ethnicity analyzed together.

Table 2 presents the distribution of interns, by project, for the universe of Sixth-Cycle interns and the distribution of the Phase II sample by the project where they received their training during Phase I.

Table 1

A Comparison of Teacher Corps Graduates Included in Phase II with the Universe of Sixth-Cycle Interns in Terms of Sex and Ethnicity

	Males	Females	Total
Phase I Interns	292	377	669
Phase II Sample	36	49	85

Chi Square=0.0122 df=1 NS*

	Black	White	Chicano	Other	Total
Phase I Interns	294	223	108	44	669
Phase II Sample	43	24	13	5	85

Chi Square=1.4327 df=3 NS

	Male				Female				Total
	B	W	C	O	B	W	C	O	
Phase I Interns	91	111	66	24	203	112	42	20	669
Phase II Sample	8	14	9	5	35	10	4	0	85

Chi Square*=7.2584** df=5 NS

*Means not significant

**"Chicano" and "Other" were pooled because of the small cell sizes.

Table 2

Distribution of Sixth-Cycle Interns and Graduates in the Phase II Sample By Project

	Project	Number of Interns in Phase I of the Study	Number of Graduates in Phase II of the Study
1	Livingston University	30	1
2	University of the Pacific	37	13
3	San Diego State University	36	8
4	University of Southern California	29	3
5	Adams State College	25	0
6	Atlanta Consortium	36	4
7	Grambling College	30	3
8	University of Massachusetts	39	0
9	Michigan State University	41	7
10	University of Nevada	29	3
11	Upsala College	33	0
12	Syracuse University	20	10
13	University of Toledo	37	0
14	Temple University	40	14
15	East Tennessee State University	51	3
16	University of Houston	39	3
17	University of Texas/El Paso	23	4
18	Norfolk State College	30	4
19	Virginia Commonwealth	30	5
20	University of Washington	34	0
	Totals	669	85

There are several patterns in the data presented in Table 2, as follows:

- There are six projects that are represented by less than two graduates in the Phase II sample.
- There are three projects that are represented by 10 or more graduates in the Phase II sample.
- There is a bias in the geographic distribution of projects having unusually small or large numbers of graduates in the Phase II sample.

The six projects with less than two graduates in the Phase II sample were not located in any special area of the country. Of the three projects where 10 or more graduates were represented in the Phase II sample, two were located in the Northeastern states. In all three cases many of the interns were hired by the district served by that project.

The distribution of the Phase II sample across projects does not seriously limit the Phase II data analysis. Graduates of all projects represented in the Phase II sample were included in all analyses of data.

It should be noted that the Phase II sample may differ from all Sixth-Cycle interns in important respects other than sex, ethnicity and project affiliation. Corwin studied graduates of earlier cycles of Teacher Corps and found:[15]

> There is reason to believe that the more liberal, permissive, alienated graduates had selectively drifted out of teaching. Compared to the teachers, those (Teacher Corps graduates) who were not teaching appeared to express more liberal social and political attitudes and endorsed a more permissive style of teaching. They were much more likely to have retained their preference for a teaching style that stressed bringing out the pupils' creativity

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[15] Ronald G. Corwin, What Difference Has The Teacher Corps Made? Final Report submitted to The Ford Foundation. Columbus, Ohio, The Ohio State University, 1973. p. 11-12.

> and were less inclined to stress discipline in the classroom, although they did place slightly more emphasis on the importance of teaching subject matter than was apparent when they were in the program.
>
> The non-teachers were slightly less likely than the teachers to attribute poor educational performance to poor home background and inclined to place some blame on the schools' inadequacies, both in areas of curriculum and lack of preparation in previous grades. They were not inclined to lay any of the blame on the children's limited capacity.

It is likely that such differences do hold for the Sixth-Cycle of Teacher Corps graduates. However, a higher percentage of Sixth-Cycle interns were from minority groups and a smaller percentage of Sixth-Cycle interns secured jobs. The reader will note in the following section of the report that the differences between Teacher Corps and control teachers are analogous to the differences between non-teachers and teachers among the graduates studied by Corwin, and the differences are in the same direction.

B. A Comparison of Teacher Corps Graduates and Control Group Teachers

This section reports the findings of a comparison between Teacher Corps and control group teachers on the teacher performance and pupil variables. These variables are described in Section II-B.

1. Teacher Performance Variables

Teacher Corps and control group teachers were compared on each of the teacher performance variables, TP1-TP23, and on the clusters of teacher performance variables, STP1-STP7. These variables were derived from the training goals of the twenty Teacher Corps projects which prepared these graduates. Comparison of Teacher Corps and control group teachers of grades 2-3 and of grades 4-6 are presented in Table 3.

Table 3

Comparison of Teacher Corps and Control Teachers on the Teacher Performance Variables

Teacher Performance Variables	Grade 2-3						Grade 4-6					
	Teacher Corps		Control		F	p	Teacher Corps		Control		F	p
	Mean	S.D.	Mean	S.D.			Mean	S.D.	Mean	S.D.		
TP1 Teacher utilizes school and community resources	1.95	1.43	1.39	.99	2.32	NS	1.53	1.12	1.81	1.20	1.66	NS
TP2 Teacher initiates contact with parents	23.50	8.17	21.30	7.04	0.97	NS	24.51	9.40	22.73	7.84	1.27	NS
TP3 Teacher perception of importance of bringing about change in the school	3.61	0.58	3.56	0.59	0.06	NS	3.66	0.70	3.73	0.45	0.52	NS
TP4 Teacher practice of bringing about change in the school	2.67	0.64	2.87	0.63	1.21	NS	2.66	0.77	2.85	0.63	2.29	NS
TP5 Teacher introduces culturally relevant new curriculum	3.08	0.78	2.57	0.73	5.57	<.025	2.95	0.81	2.88	0.83	0.20	NS
TP6 Teacher plans lesson with teaching team	0.58	1.21	0.61	1.12	0.01	NS	0.85	1.54	1.12	2.15	0.61	NS
TP7 Extent of all materials development and lesson planning by teacher	11.33	5.98	7.65	3.75	6.32	<.025	10.10	6.01	9.17	5.20	.82	NS
TP8 Extent of teacher/pupil interaction	64.22	9.15	65.60	8.11	0.30	NS	65.10	9.61	67.01	6.29	1.70	NS

Table 3 (Continued)

Teacher Performance Variables	Grade 2-3						Grade 4-6					
	Teacher Corps		Control		F	p	Teacher Corps		Control		F	p
	Mean	S.D.	Mean	S.D.			Mean	S.D.	Mean	S.D.		
TP9 Extent of positive teacher behavior	0.86	1.46	0.63	0.98	0.40	NS	0.66	1.08	0.54	1.08	0.36	NS
TP10 Range of teacher positive and negative behavior	1.45	1.75	1.57	1.40	0.06	NS	1.10	1.31	1.20	1.46	0.17	NS
TP11 Teacher asks openended questions	6.18	4.90	5.87	6.20	0.04	NS	6.30	0.49	5.29	6.52	0.54	NS
TP12 Teacher is highly directive in structuring discussion and class	16.41	5.65	16.70	5.17	0.03	NS	12.67	4.95	13.25	4.44	0.46	NS
TP13 Teacher gives acknowledgement	5.41	2.90	5.73	3.57	0.12	NS	3.99	3.44	4.00	3.18	0.00	NS
TP14 Teacher gives praise	2.14	2.17	2.15	1.87	0.00	NS	1.01	1.28	1.08	1.46	0.08	NS
TP15 Teacher gives corrective feed-back in academic area	7.24	5.18	5.96	4.46	0.82	NS	6.82	3.87	7.19	5.02	0.21	NS
TP16 Degree that instructional choices are given to pupils	10.00	1.98	8.78	1.44	5.68	$<.025$	10.24	2.62	9.59	1.89	2.35	NS
TP17 Extent that pupils work independently or in small groups	36.70	24.09	33.30	26.81	0.21	NS	46.04	32.75	42.80	30.53	0.32	NS

Table 3 (Continued)

Teacher Performance Variables	Grade 2-3						Grade 4-6					
	Teacher Corps		Control		F	p	Teacher Corps		Control		F	p
	Mean	S.D.	Mean	S.D.			Mean	S.D.	Mean	S.D.		
TP18 Attention given to academic subjects	79.24	7.99	85.71	5.50	10.38	<.005	84.01	9.01	85.29	8.44	0.65	NS
TP19 Attention given to reading instruction	9.50	3.28	13.48	3.63	15.55	<.001	9.44	3.86	10.45	3.75	2.19	NS
TP20 Extent of attention given to social and general (non-academic) discussion in class	5.94	5.79	6.75	9.04	0.14	NS	6.88	8.05	6.09	5.01	0.43	NS
TP21 Extent of attention given to pupil behavior problems	5.18	5.12	6.55	5.04	0.85	NS	5.67	4.46	6.59	5.00	1.13	NS
TP22 Teacher perceives reading failure of pupils as internal to teacher	32.79	3.89	30.13	3.64	4.50	<.05	32.56	3.44	31.87	2.55	1.25	NS
TP23 Teacher perceives poverty as due to society at large	24.52	2.25	22.95	3.12	3.46	<.10	24.21	2.83	21.95	2.96	17.36	<.001

Table 3 (Continued)

Facets of Teaching	Grade 2-3						Grade 4-6					
	Teacher Corps		Control		F	p	Teacher Corps		Control		F	p
	Mean	S.D.	Mean	S.D.			Mean	S.D.	Mean	S.D.		
STP1 Utilization of Community Resources	0.98	0.39	0.99	0.40	0.05	NS	1.18	0.49	0.94	0.36	3.39	<.10
STP2 Action as a Change Agent in the School	1.44	0.41	1.53	0.26	2.12	NS	1.36	0.38	1.41	0.41	0.19	NS
STP3 Lesson Planning and Materials Development	1.05	0.43	1.00	0.42	0.46	NS	1.33	0.55	0.99	0.32	6.51	<.01
STP4 Affective Time	0.98	0.39	1.01	0.36	0.16	NS	0.76	0.46	0.77	0.34	0.01	NS
STP5 Teacher Response Strategies	0.72	0.39	0.74	0.42	0.13	NS	0.92	0.52	0.89	0.39	0.08	NS
STP6 Individualization of Instruction	0.93	0.43	0.83	0.38	1.92	NS	0.83	0.36	0.69	0.34	2.04	NS
STP7 Perception of problems related to schooling	1.26	0.36	1.04	0.31	10.94	<.01	1.27	0.30	0.88	0.31	13.77	<.01

For teachers of grades 2-3, Teacher Corps graduates performed better than control group teachers on the following teacher performance variables:

- Teacher introduces culturally relevant new curriculum (TP5).
- Extent of all materials development and lesson planning by teacher (TP7).
- Degree that instructional choices are given to pupils (TP16).
- Teacher perceives reading failure of pupils as internal to teacher (TP22).
- Teacher perceives poverty as due to society at large (TP23).

Control group teachers, however, did give greater attention to academic subjects (TP18) and to reading instruction (TP19).

For teachers of grades 4-6, Teacher Corps graduates performed significantly better on the following variables:

- Teacher perceives poverty as due to society at large (TP23).
- Utilization of community resources (STP1).
- Lesson planning and materials development (STP3).
- Perception of problems related to schooling (STP7).

For grades 4-6, the control teachers did not score significantly higher than Teacher Corps graduates on any teacher performance variable.

In addition, the two groups of teachers were compared using all teacher performance measures taken together by means of multivariate analysis of variance. For teachers in grades 4-6, Teacher Corps graduates differed significantly from the controls when all teacher performance variables were analyzed together. The difference was significant at the $p < .035$ level. It was not possible to perform such a multivariate test for teachers in grades 2-3 due to the ratio of missing data to sample size. However, the difference would almost certainly be significant given the number of statistically significant differences between the two groups of teachers on individual teacher performance variables.

Several conclusions can be drawn from these data. First, Teacher Corps graduates are superior to control group teachers on many of the teacher performance variables desired by Teacher Corps projects. It would appear that through a combined process of selection and training of interns, Teacher Corps projects prepared teachers who are different from other young teachers who teach the same type of student in the same district.

The data analysis in Phase I focused on identifying patterns of relationship between teacher background, Teacher Corps training and intern teacher performance variables. For the most part, there was little evidence of a relationship between specific Teacher Corps selection and program characteristics, and intern teacher performance variables. The analysis reported in this section of the report, however, suggests that there is a general (but as yet undifferentiated) relationship between selection and training of Teacher Corps interns and their performance as first year teachers. A study of the relationship of Teacher Corps training to teacher performance for the Teacher Corps graduates will be presented in a subsequent section of this report.

A second conclusion to be drawn from the data is that Teacher Corps graduates were most different from control group teachers in terms of:

- developing ethnically relevant curricula.

- using community resources in teaching and initiating contact with parents.
- positive attitudes about reading development and causes of poverty in the society.

These variables reflect a special concern about low income/minority group children on the part of the graduate. This emphasis is consistent with the training goals of many Sixth-Cycle Teacher Corps projects.

The development of ethnically relevant curricula involved a variety of activities. In Phase I the introduction of ethnically relevant curricula included the development of new instructional techniques and materials designed to assist low income/minority group children learn traditional educational subject matter more effectively. It also included the innovative curriculum materials in new subject areas such as the history and sociology of blacks and Mexican-Americans. The development of ethnically relevant curricula in Phase II also included new approaches and new subject areas.

The consistent difference between Teacher Corps and control teachers on this variable suggests that Teacher Corps graduates had different curriculum goals for children than did control group teachers. This hypothesis is supported by the finding that control group teachers gave greater emphasis to academic subjects and to reading instruction as reported above.

It would be difficult to assess the effectiveness of Teacher Corps graduates in areas like teaching the history of certain ethnic groups. One complicating factor would be the diversity of curriculum goals held by teachers in curriculum areas such as this. Another complicating factor is the diversity in the pupil population. However this study does provide information about the effects of differences in teacher performance on reading and self-concept development in pupils.

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The second consistent difference between Teacher Corps and control teachers was in terms of using community resources in teaching and initiating contact with parents. This difference was unexpected. While Teacher Corps projects in Phase I placed considerable emphasis on such activities, it was expected that these "luxuries", requiring special time and energy, would soon be done away with due to the demanding schedule of a first year teacher.

The third consistent difference between Teacher Corps and control teachers, the teacher's attitudes about reading development and causes of poverty, was also consistent with the training goals of Teacher Corps projects studied in Phase I. Regarding attitudes about poor reading development in pupils, Teacher Corps graduates believed they had more control over a pupil's reading development. They were more likely to agree with statements that reading difficulties are due to:

- How much teacher preparation goes into a reading lesson.
- How much creativity the teacher has.
- The ability of the teacher to communicate with his/her student.

Control group teachers, on the other hand, were more likely to blame poor reading ability on such things as:

- How much the student cares about learning to read.
- The socioeconomic background of the student.

Similarly, control group teachers were more likely to blame poverty on such things as lack of effort by poor persons whereas Teacher Corps graduates were more likely to blame poverty on low wages and the failure of society to provide good schools for many Americans.

In short, Teacher Corps graduates differed from control teachers in terms of their utilization of community resources in teaching, their initiation of contact with parents, their development of ethnically relevant curriculum materials and their attitudes about responsibility for poor reading achievement and poverty. These activities and attitudes reflected a broad-based concern for low income/minority group children on the part of graduates.

An additional conclusion can be drawn concerning the ways that Teacher Corps graduates and control teachers differ. There was no difference between the two groups in terms of their perception of the importance of bringing about educational change in the school. In addition, there were no differences in their actual practice in attempting to bring about this change.

No differences were observed between Teacher Corps graduates and controls on any teacher performance variable based on classroom observation of the teacher. More specifically, Teacher Corps graduates and controls did not differ on the observed affective tone in the classroom, on teacher questioning, structuring or response strategies or on the degree of attention given pupil behavioral problems in the classroom. Thus, rather clear and consistent differences between Teacher Corps graduates and controls on such things as the introduction of culturally relevant materials or the use of community resources did not generalize to such areas as being a change agent in the school or the interaction between teacher and pupils in the classroom as assessed by the teacher performance measures used in the study.

It should be pointed out that many Teacher Corps graduates obtained jobs in education other than as classroom teachers. It might be that these other jobs provided greater opportunity for institutional change and attracted graduates with greater interest, ability and energy to bring about such change. Consequently, Teacher Corps graduates with teaching jobs may represent graduates with greater interest in teaching, materials development and contact with parents while graduates in non-teaching jobs may represent graduates with a greater interest in institutional change. Such a hypothesis is supported by a finding from Phase I of the study. It was found that the extent that interns brought about change in the school and perceived this type of change as being important was inversely related to the amount of intern-initiated contact with parents ($r=-.57$) and to a pattern of classroom interaction where children initiated the interaction ($r=-.47$).

2. Pupil Variables

Pupil growth was assessed in terms of four areas of growth, as follows:

- Reading
- Self-concept
- School attendance
- Classroom interaction

The results of the analysis of pupil growth are presented in Tables 4, 5 and 6.

Table 4 presents the mean pre and post-test scores for the reading and self-concept tests. These are the unadjusted scores for Teacher Corps and control group teachers of grades 2-3 and 4-6. Table 4 also presents the results of a t test of the difference between Teacher Corps and control teachers on each variable. A significant difference between groups on any pre-test score would suggest that the groups were not well-matched relative to that variable.

Table 4

Reading and Self-Concept Test Scores

For All Pupils

			Grade 2-3						Grade 4-6					
			Teacher Corps		Control		t	p	Teacher Corps		Control		t	p
	Pupil Variables		Mean	S.E.	Mean	S.E.			Mean	S.E.	Mean	S.E.		
Reading	P1 Word Knowledge	pre	51.2*	2.06	51.0	1.60	.08	NS	64.5	1.37	67.9	1.47	1.20	NS
		post	57.1	1.79	56.4	1.54	.27	NS	67.1	1.35	69.9	1.45	1.39	NS
	P2 Reading Comprehension	pre	47.8*	2.34	48.3	1.71	.19	NS	62.1	1.58	65.8	1.66	1.59	NS
		post	53.8	2.28	53.6	2.01	.07	NS	65.6	1.51	70.2	1.59	2.03	<.05
	P3 Total Reading	pre	48.4*	2.19	48.6	1.60	.07	NS	62.6	1.54	65.9	1.65	1.45	NS
		post	54.6	2.03	54.0	1.68	.21	NS	65.9	1.54	69.8	1.59	.73	NS
Self-Concept	P4 Good Behavior	pre	67.8	2.89	68.8	2.60	.25	NS	72.6	1.03	72.8	1.19	.17	NS
		post	71.2	2.22	71.2	2.74	.02	NS	74.8	1.05	74.8	1.25	.07	NS
	P5 School Status	pre	69.4	1.80	71.2	1.40	.77	NS	66.4	1.07	66.7	1.00	.23	NS
		post	71.5	1.24	70.6	1.78	.40	NS	68.4	0.94	67.9	1.18	.30	NS
	P6 Physical Appearance	pre	68.9	2.91	66.2	2.00	.75	NS	62.5	1.45	62.3	1.33	.13	NS
		post	67.3	1.97	67.6	2.10	.08	NS	65.6	1.48	62.9	1.51	1.30	NS
	P7 Lack of Anxiety	pre	63.5	2.16	63.4	2.69	.05	NS	67.4	0.98	67.6	1.07	.18	NS
		post	63.7	2.39	65.9	3.22	.54	NS	70.0	1.01	70.0	1.11	.09	NS
	P8 Popularity	pre	63.0	1.82	63.6	1.67	.20	NS	64.0	0.95	66.5	0.90	1.95	<.10
		post	64.4	1.59	64.8	1.80	.18	NS	68.5	0.94	68.0	1.01	.40	NS
	P9 Happiness and Satisfaction	pre	71.2	2.60	70.1	3.24	.26	NS	75.0	0.98	76.2	1.02	.88	NS
		post	74.3	2.16	74.6	2.91	.08	NS	79.3	1.09	77.7	1.05	1.05	NS
	P10 Total Self-Concept	pre	66.8	1.77	67.4	1.78	.22	NS	68.1	0.80	68.5	0.74	.38	NS
		post	68.5	1.44	69.0	1.79	.23	NS	70.6	0.72	69.9	0.95	.58	NS

*Scores on the reading test are expressed as standardized scores.

Table 5 presents the regression coefficients for the regression of the post-test score on the pre-test score for each variable. Since the regression coefficient is influenced by the variability in pre- and post-test data as well as the rate of change between pre-test and post-test, it should be interpreted cautiously. Table 5 also presents the extent to which the regression slopes of Teacher Corps and control group differ. A significant difference in these slopes for any variable indicates that for that variable, a necessary condition for the preferred method of analysis (analysis of covariance) was not met. Hence, the test of significant differences between Teacher Corps and control teachers for that variable was based on an analysis of unadjusted difference scores rather than on an analysis of covariance.

Table 6 presents the mean and standard deviation of pupil variable P11-P15 (attendance and classroom interaction) for Teacher Corps and control teachers of grades 2-3 and 4-6. It also presents the result of a test of the difference between Teacher Corps and control teachers on each of these variables.

There were no significant differences between Teacher Corps graduates and control teachers in terms of the reading gains of their pupils. This was true for teachers of grades 2-3 and grades 4-6. However, pupils in grades 4-6 who were taught by Teacher Corps graduates made significantly greater gains in self-concept. These pupil gains scored significantly higher on three of the sub-scales of the self-concept test, as follows:

- Physical appearance and attributes
- Popularity
- Happiness and satisfaction

For grades 2-3, there were no significant differences between the two groups of teachers on any of the self-concept variables.

Table 5

Regression Coefficients and Significance Tests

For Reading and Self-Concept Variables

	Pupil Variables for Grade 2-3	Teacher Corps		Control		t	P	Technique for Significance Test of Means*	F	P	[illegible] Group
		b	S.E.	b	S.E.	of slope difference					
Reading	P1 Word Knowledge	0.825	0.060	0.873	0.101	.41	NS	A	.32	NS	-
	P2 Reading	0.836	0.111	0.875	0.190	.18	NS	A	.15	NS	
	P3 Total Reading	0.868	0.073	0.903	0.130	.23	NS	A	.43	NS	-
Self-Concept	P4 Good Behavior	0.537	0.166	0.932	0.155	1.74	<.05	D	.13	NS	-
	P5 School Status	-0.187	0.200	0.497	0.293	.25	NS	A	.17	NS	-
	P6 Physical Appearance	0.413	0.162	0.990	0.213	.43	NS	A	.32	NS	-
	P7 Lack of Anxiety	0.861	0.209	0.554	0.293	.90	NS	A	.32	NS	-
	P8 Popularity	0.231	0.254	0.663	0.192	..00	NS	A	.01	NS	-
	P9 Happiness and Satisfaction	0.664	0.151	0.717	0.224	1.29	NS	A	.18	NS	-
	P10 Total Self-Concept	0.304	0.227	0.717	0.224	1.29	NS	A	.02	NS	-

*A=Analysis of co variance of post scores adjusted by pre-score (used when b's are not significantly different).
D=Analysis of variance of differences between pre and post test scores (used when b's are significantly different).

Table 5 (Continued)
Regression Coefficients and Significance Tests
For Reading and Self-Concept Variables

	Pupil Variables for Grade 4-6		Teacher Corps		Control		t	p	Technique for Significance Test of Means*	F	p	Superior Group
			b	S.E.	b	S.E.	of slope difference					
Reading	P1	Word Knowledge	0.914	0.052	0.921	0.050	.10	NS	A	.54	NS	-
	P2	Reading	0.933	0.056	0.909	0.042	.34	NS	A	2.23	NS	-
	P3	Total Reading	0.932	0.051	0.916	0.042	.24	NS	A	1.13	NS	-
Self-Concept	P4	Good Behavior	0.708	0.102	0.743	0.115	.23	NS	A	.04	NS	-
	P5	School Status	0.551	0.095	0.853	0.117	2.00	<.05	D	.39	NS	-
	P6	Physical Appearance	0.779	0.091	0.647	0.134	.81	NS	A	2.68	<.10	TC
	P7	Lack of Anxiety	0.375	0.132	0.768	0.100	2.37	<.025	D	.01	NS	-
	P8	Popularity	0.431	0.124	0.666	0.129	1.31	NS	A	2.51	<.10	TC
	P9	Happiness and Satisfaction	0.247	0.150	0.727	0.105	2.62	<.025	D	3.39	<.10	TC
	P10	Total Self-Concept	0.564	0.097	7.003	0.115	12.92	<.025	D	1.43	NS	-

*A=Analysis of co-variance of post scores adjusted by pre-score (used when b's are not significantly different).
D=Analysis of variance of differences between pre and post test scores (used when b's are significantly different).

Table 6

Pupil Classroom Interaction Variables for
Teacher Corps and Control Group Teachers

	Teacher Corps		Control		F	p
Pupil Variables	Mean	S.D.	Mean	S.D.		
Grade 2-3						
P11 Pupil school attendance	80.07	3.56	79.94	3.40	0.01	NS
P12 Initiating interaction	4.17	3.09	7.77	6.72	5.66	<.025
P13 Instructing self or others	21.88	12.79	21.29	11.42	0.03	NS
P14 Displaying happiness	1.74	1.79	1.26	1.26	1.11	NS
P15 Making task-related comment	42.63	21.53	35.50	18.35	1.49	NS
Grade 4-6						
P11 Pupil school attendance	80.97	3.14	80.93	2.93	0.00	NS
P12 Initiating interaction	4.79	5.47	4.26	4.72	0.33	NS
P13 Instructing self or others	16.77	11.85	18.25	11.66	0.49	NS
P14 Displaying happiness	1.50	1.46	1.00	1.24	4.16	<.05
P15 Making task-related comment	50.55	18.18	46.52	17.67	1.54	NS

On the classroom interaction variables there were several interesting differences between the two groups. For grades 2-3, control group teachers had pupils who initiated questions and comments to the teacher far more often than the pupils of Teacher Corps graduates. On the other hand, pupils of Teacher Corps graduates, in grades 4-6, displayed behavioral indicators of happiness and self-worth more often than did pupils of the control group teachers. Indicators of happiness included obvious behavioral expressions of happiness or positive affect, such as laughing, smiling and giggling. Expressions of self-worth included such things as a child's statements of self-worth, self-praise or self-esteem; exclamations of accomplishment, and positive remarks about one's self including bragging. Hence, for grades 4-6, pupils in classes taught by Teacher Corps graduates expressed feelings of greater happiness, greater self-worth and a better self-concept both on the self-concept test and in their behavior in the classroom.

These data lead to two conclusions. First, there were no significant differences between Teacher Corps and control group classes on any reading measure despite a greater emphasis on reading instruction and academic subject matter on the part of control group teachers in grades 2-3. This finding needs to be interpreted carefully.

For example, it does not mean that no first year teacher in the study was especially effective in bringing about reading gain. Some teachers were considerably more effective than others and the characteristics of these effective teachers will be explored later in this report. The lack of difference between Teacher Corps and control teachers does mean that neither group of teachers was clearly more effective in terms of bringing about reading gain in pupils.

Another example of what this finding does not mean relates to the effectiveness of Teacher Corps training. It is not appropriate to conclude that Teacher Corps is not able to prepare teachers who are more effective teachers as reading teachers. Teacher Corps training at many projects emphasized team teaching and the individualization of instruction for children as effective means to teach reading. Many Teacher Corps graduates secured jobs on teaching teams, yet these teachers were not included in the study for reasons discussed in Section II-A. No data was gathered regarding the effectiveness of team teaching and it may be that graduates in this type of teaching role are more effective reading teachers. It can be concluded, however, that Teacher Corps graduates in conventional classroom roles are no more effective than other teachers in this same teaching role in bringing about reading gain in pupils.

The second conclusion is that Teacher Corps graduates, teaching grades 4-6, were able to bring about changes in a child's self-concept that were significantly greater than changes brought about by control group teachers. These changes consisted of observed expressions of greater happiness and greater self-worth in the classroom and better scores on important sub-scales of the Self Concept Scale.

A positive self-concept is important for several resons. First, a positive self-concept has been argued to be good in and of itself. It depicts a child who can deal with the world and feels good about himself. Secondly, self-concept and a related attitude, pupil locus of control, are thought to be antecedents of success in academic subjects such as reading.

Of particular importance are two sub-scales on the Piers-Harris Self Concept Scale. These are two of three sub-scales on which pupils of Teacher Corps graduates scored significantly higher than did pupils of control group teachers. The first is a child's self-concept about his physical appearance and attributes. This sub-scale includes items such as "I am good looking", "I have a pleasant face", and "I have a bad figure".

Many children have real concerns about their body image and appearance. Children from many minority groups are often burdened with the additional problem of racial and ethnic discrimination related to physical characteristics. In this context, the minority group child's self-concept about his/her physical appearance is especially important but also is especially difficult to improve. Consequently, it is remarkable that Teacher Corps graduates could bring about significantly greater gain on this sub-scale within one school year.

The second sub-scale pertains to a child's feelings of happiness and satisfaction. Typical items from this sub-scale are "I am a happy person", "I like being the way I am", and "I wish I were different". These items are directly related to a child's satisfaction and happiness with himself. As such, this sub-scale may be more central to a child's attitude about himself than are several of the other sub-scales such as good behavior, intellectual and school status, and lack of anxiety. Thus it is doubly unusual that Teacher Corps graduates could bring about significantly greater gain in pupils on both their attitude about their physical appearance and attributes and their sense of happiness and satisfaction with themselves.

C. Antecedents of Teacher Effectiveness: Teacher Background and Training Related to Teacher Performance and Teacher Effectiveness

The discussion in this section is divided into three parts. The first deals with the relationship of teacher performance variables to pupil learning variables. The second deals with the relationship of teacher background and teacher education program variables to the teacher performance variables and the third deals with the relationship of teacher background and teacher education program variables directly to the pupil variables. The reader should keep in mind that for all of this section, the analysis was limited to a study of the Teacher Corps graduates and their pupils.

1. The Relationship of Teacher Performance Variables to Pupil Learning Variables

Several statistical techniques were used to explore the relationship of teacher performance variables to pupil variables for Teacher Corps graduates in the study. Table 7 reports significant correlations between each pupil variable and the teacher performance variables for these teachers. Table 8 presents discriminant function analyses with teacher performance variables as predictors and subgroups of teachers as dependent variables. For each analysis, all teachers were divided into two subgroups (above average and below average) based on class averages on each of four pupil variables. The pupil variables used were total reading gain (P3), total self-concept gain (P10) and each of two classroom interaction variables (P12 and P13). Finally, teacher performance variables were related to combinations of pupil variables as defined by a canonical correlation analysis. The only two pupil variables that were important in any of the linear combinations were total reading gain and total self-concept gain, hence the analysis was rerun using only these two pupil variables.

Table 9 presents teacher performance variables that are highly related to both total reading gain and total self-concept gain. The first entry shows teacher performance variables that are highly related to a situation where both reading gain and self-concept gain were highly related to a situation where reading gain was unusually high but self-concept gain was unusually low. This analysis is especially important to policy-makers.

Table 7

Teacher Performance Variables that are Significantly Correlated with Pupil Variables

Pupil Variable	Correlation	Teacher Performance Variable	
P1 Word knowledge	-.23	TP8	Extent of teacher/pupil interaction
	-.20	TP18	Attention given to academic subjects
	-.20	TP19	Attention given to reading instruction
	.22	TP20	Extent of attention given to social and general (non-academic) discussion in class
P2 Reading comprehension	.36	TP1	Teacher utilizes school and community resources
	.23	TP4	Teacher practice of bringing about change in the school
	.24	TP20	Extent of attention given to social and general (non-academic) discussion in class
	.22	TP22	Teacher perceives reading failure of pupils as internal to teacher
P3 Total reading	.29	TP1	Teacher utilizes school and community resources
	-.25	TP8	Extent of teacher/pupil interaction
	-.21	TP19	Attention given to reading instruction
	.28	TP20	Extent of attention tiven to social and general (non-academic) discussion in class

Table 7 Continued

Pupil Variable	Correlation	Teacher Performance Variable	
P4 Good behavior		No Significant Correlations	
P5 School status	.26	TP2	Teacher initiates contact with parents
	.32	TP3	Teacher perception of importance of bringing about change in the school
	.23	TP5	Teacher introduces culturally relevant new curriculum
	.34	TP23	Teacher perceives poverty as due to society at large
P6 Physical appearance	.32	TP3	Teacher perception of importance of bringing about change in the school
	-.20	TP12	Teacher is highly directive in structuring discussion and class
	.38	TP23	Teacher perceives poverty as due to society at large
P7 Lack of anxiety	-.21	TP12	Teacher is highly directive in structuring discussion and class
P8 Popularity	.38	TP3	Teacher perception of importance of bringing about change in the school
	.22	TP5	Teacher introduces culturally relevant new curriculum

Table 7 Continued

Pupil Variable	Correlation	Teacher Performance Variable	
P8 Popularity (Continued)	.23	TP6	Teacher plans lesson with teaching team
	.25	TP23	Teacher perceives poverty as due to society at large
P9 Happiness and satisfaction	.21	TP1	Teacher utilizes school and community resources
	.22	TP3	Teacher perception of importance of bringing about change in the school
	,23	TP6	Teacher plans lesson with teaching team
	-.24	TP10	Range of teacher positive and negative behavior
	-.21	TP13	Teacher gives acknowledgement
	-.22	TP18	Attention given to academic subjects
P10 Total self-concept	.30	TP2	Teacher initiates contact with parents
	.26	TP3	Teacher perception of importance of bringing about change in the school
	-.21	TP12	Teacher is highly directive in structuring discussion and class
	.29	TP23	Teacher perceives poverty as due to society at large

Table 7 Continued

Pupil Variable		Correlation	Teacher Performance Variable	
P11	Pupil school atttendance	-.24	TP13	Teacher gives acknowledgement
		.29	TP16	Degree that instructional choices are given to pupils
		-.27	TP23	Teacher perceives poverty as due to society at large
P12	Pupil initiating interaction with teacher	.20	TP3	Teacher perception of importance of bringing about change in the school
		.20	TP4	Teacher practice of bringing about change in the school
		-.30	TP10	Range of teacher positive and negative behavior
		-.20	TP11	Teacher asks open-ended questions
		-.38	TP12	Teacher is highly directive in structuring discussion and class
		-.43	TP13	Teacher gives acknowledgement
		-.18	TP14	Teacher gives praise
		.22	TP15	Teacher gives corrective feedback in academic area
		.22	TP16	Degree that instructional choices are given to pupils
		.28	TP17	Extent that pupils work independently or in small groups

Table 7 Continued

Pupil Variable	Correlation	Teacher Performance Variable	
P12 Pupil initiating interaction with Teacher (Continued)	.26	TP20	Extent of attention given to social and general (non-academic) discussion in class
	-.26	TP21	Extent of attention given to pupil behavior problems
P13 Pupil instructing self or other pupils	.22	TP5	Teacher introduces culturally relevant new curriculum
	.27	TP10	Range of teacher positive and negative behavior
	.26	TP12	Teacher is highly directive in structuring discussion and class
	-.24	TP15	Teacher gives corrective feedback in academic area
	-.27	TP23	Teacher perceives poverty as due to society at large
P14 Pupil displays happiness or feelings of self-worth		No significant correlation	
P15 Pupil making task-related comment	.19	TP10	Range of teacher positive and negative behavior
	.41	TP12	Teacher is highly directive in structuring discussion and class

Table 8

Discriminant Analysis with Teacher Performance Variables as Predictors of Pupil Variables

Pupil Variable	Teacher Performance Variables that are Good Predictors	p
P3 Total Reading	TP1 Teacher utilizes school and community resources	<.01
	TP3 Teacher perception of importance of bringing about change in the school	<.10
	TP8 Extent of teacher/pupil interaction	<.05
	TP10 Range of teacher positive and negative behavior	<.10
	TP12 Teacher is highly directive in structuring discussion and class	<.025
	TP13 Teacher gives acknowledgement	<.10
	TP14 Teacher gives praise	<.10
	TP19 Attention given to reading instruction	<.025
	TP22 Teacher perceives reading failure of pupils as internal to teacher	<.025
	TP23 Teacher perceives poverty as due to society at large	<.05
P10 Total Self-Concept	TP2 Teacher initiates contact with parents	<.05
	TP4 Teacher practice of bringing about change in the school	<.10
	TP9 Extent of positive teacher behavior	<.10

Table 8 Continued

Pupil Variable	Teacher Performance Variables that are Good Predictors	p
	TP14 Teacher gives praise	<.10
	TP16 Degree that instructional choices are given to pupils	<.10
	TP21 Extent of attention given to pupil behavior problems	<.10
	TP22 Teacher perceives reading failure of pupils as internal to teacher	<.05
P12 Pupil Initiating Interaction with Teacher	TP4 Teacher practive of bringing about change in the school	<.05
	TP13 Teacher gives acknowledgement	<.10
	TP15 Teacher gives corrective feedback in academic area	<.05
	TP17 Extent that pupils work independently or in small groups	<.10
	TP23 Teacher perceives poverty as due to society at large	<.05
P13 Pupil Instructing Self or Other Pupils	TP2 Teacher initiates contact with parents	<.05
	TP6 Teacher plans lesson with teaching team	<.10
	TP10 Range of teacher positive and negative behavior	<.10
	TP13 Teacher gives acknowledgement	<.10
	TP20 Extent of attention given to social and general (non-academic) discussion in class	<.10

Table 9

Canonical Correlations of

Teacher Performance Variables and Pupil Variables

		Teacher Performance Variables		
Pupil Variables	Correlation	Coefficient	Variable Name	
Total Self-Concept + (.39) Total Reading	.83	-1.00	TP22	Teacher perceives reading failure of pupils as internal to teacher
		-.92	TP8	Extent of teacher/pupil interaction
		.79	TP4	Teacher practice of bringing about change in the school
		.58	TP2	Teacher initiates contact with parents
		.55	TP6	Teacher plans lesson with teaching team
Total Reading -(.45) Total Self-Concept	.630	1.00	TP12	Teacher is highly directive in structuring discussion and class
		-.95	TP4	Teacher practice of bringing about change in the school
		-.85	TP2	Teacher initiates contact with parents
		.62	TP15	Teacher gives corrective feedback in academic area
		-.60	TP1	Teacher utilizes school and community resources

The most straightforward and concise results regarding the relationship of teacher performance variables to total reading gain and total self-concept gain come from the canonical correlation analysis as presented in Table 9. Unusually large pupil gains in both reading and self-concept were most closely associated with a teacher who perceived that reading development was primarily a function of pupil characteristics such as how hard the pupil tries rather than teacher characteristics such as how carefully the teacher plans the lesson.[16] Unusually large gains were also associated with teachers who had a low level of teacher/pupil interaction and with the teacher's practice of bringing about change in the school, the teacher's practice of initiating contact with parents and the teacher's practice of planning lessons with a team of teachers.

Another set of teacher performance variables was related to an unusually large reading gain coupled with an unusually small self-concept gain. Such a combination of reading gain at the expense of self-concept gain was positively associated with a teacher who was highly directive in structuring the discussion and the classroom, and with a teacher who gave a good deal of corrective feedback to pupils. Reading gain at the expense of self-concept gain was also associated with a teacher who was below average in bringing about change in the school and who was below average in initiating contact with parents

Three other teacher performance variables were significantly related to reading gain. The single highest correlate of reading gain was the teacher's utilization of school and community resources. Total reading gain was also positively correlated with the extent of attention given to social and general (non-academic) discussion in class and was negatively correlated with attention given to reading instruction. Two other correlates of total self-concept gain were significant. Total self-concept gain was positively correlated with the teacher's perception of the importance of bringing about change in the school and with the teacher's perception that poverty is due to societal rather than individual factors.

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[16] In this linear combination, self-concept gains are three times more important than are reading gains.

Several trends emerge from these data. The teachers who were successfully able to maximize both reading and self-concept gain had several characteristics in common. These successful teachers believed that pupil characteristics rather than teacher characteristics are most important in determining a child's reading development. It may be that these teachers trust in a child and his ability to learn more than do teachers who believe teacher characteristics are most important in determining a child's reading development. The successful teacher may have strengthened a child's internal locus of control, or may have communicated an expectation that the child will learn. In addition, the second teacher performance variable associated with large growth in both reading and self-concept suggests that these teachers also provided children with a chance to work independently. A low ratio of teacher/pupil interaction was highly related to the extent that children worked alone or in small groups.

Thus, it appears that successful teachers (related to pupil gain in both reading and self-concept) not only believed in the child's importance in the learning process but also provided children a chance to learn on their own. Moreover, such a teacher was also active in changing the school and in working with parents. In Phase I of this study it was found that teachers who were active in institutional change were not the teachers who were most involved with parents nor were they most effective in the classroom, as defined by certain teacher performance variables. In the case of successful teachers as discussed above, however, it appears that they are active on many fronts: school reform, contact with parents, and reading and self-concept gain with pupils.

A quite different type of teacher is able to bring about large reading gain but at the expense of the development of a positive self-concept in children. Such a teacher is highly directive in guiding the classroom discussion and uses corrective feedback extensively. Whereas the teacher who brought about both large reading and self-concept gains frequently allowed children to work independently, this type of teacher was often guiding children to the "right" answer by means of close-ended questions and corrective feedback. In addition, the teacher who was successful in both reading and self-concept development was frequently working with parents while the teacher who brought about high reading gain at the expense of self-concept gain was considerably below average in bringing about school reform or in initiating contact with parents. It is very important to see that activities and attitudes of teachers about practices such as school reform and communication with parents were among the teacher performance variables most closely associated with pupil growth in both reading and self-concept development.

Reading gain, considered independently of self-concept gain, was associated with several other teacher performances variables. High reading gain was positively associated with a teacher's utilization of school and community resources. This may be one way that a teacher's attitudes about school reform and communication with parents are brought to bear upon the instruction of children. In this context it is important to note that the extent to which a teacher introduces culturally relevant curricula is only slightly ($r=.09$) related to total reading gain. Teacher Corps graduates performed better on this teacher performance variable than did control teachers. However, from this analysis it is clear that the introduction of culturally relevant curricula is not related to reading gain in pupils.

Reading gain was also positively associated with the extent that attention was given to social and general (non-academic) discussion in class and was negatively associated with the extent that reading instruction was emphasized. This finding is the opposite of what one might expect. Perhaps social and general discussion helped establish rapport that led to reading gain. On the other hand, extensive attention and time given to reading instruction could have resulted once teachers discovered that children had reading difficulties. It also might have alienated the pupils so that they made less progress in reading.

Large self-concept gain, considered independently of reading gain, was positively associated with a teacher's attitude that poverty was due to societal rather than individual factors. Such a teacher would be less likely to blame or denigrate poor children; perhaps this aided the child's self-concept development. It may be, however, that a teacher's attitude about why some people are poor is only associated with a third variable, such as liberal political views, which is more clearly and directly associated with a child's self-concept development. Hence it would be inaccurate to relate self-concept gain directly to a teacher's attitude about poverty.

Several conclusions can be drawn about the relationship of teacher performance variables to the school attendance and pupil classroom interaction variables. First, no teacher performance variable was significantly correlated with the extent to which pupils display happiness or feelings of self-worth in the classroom (P14). The reader should keep in mind that on this pupil variable, Teacher Corps and control group teachers were significantly different. Yet no teacher performance variable was significantly associated with this pupil variable; consequently, the difference between Teacher Corps graduate and control teachers could not be further explored.

A second conclusion to be drawn about the relationship of teacher performance variables to school attendance or pupil classroom interaction variables is that there is no consistent pattern of relationship between certain teacher performance variables and these pupil variables. Teacher performance variables which are negatively correlated with one pupil variable are positively correlated with another of these pupil variables. In good part this is due to the fact that the pupil variables in question, P11-P15, are often negatively correlated with each other. Table 10 presents these correlations.

Table 10

Partial Correlations Among

Certain Pupil Variables

		P12	P13	P14	P15
P11	Pupil school attendance	.49	-.25	-.32	-.51
P12	Pupil initiating interaction with teacher		-.30	-.42	-.75
P13	Pupil instructing self or other pupils			.08	.20
P14	Pupil displays happiness or feelings of self-worth				.32
P15	Pupil making task-related comment				—

Compared to the correlations between teacher performance and these pupil variables, the correlations among these pupil variables are quite high and yet interpretable. For example, the variable pupil structing self or others (P13; r=-.30), pupil displaying happiness or feelings of self-worth (P14; r=-.42) and pupil making task-related comment (P15; r=-.75). A pupil initiating interaction with the teacher usually happens during a dialogue with the teacher whereas the latter three pupil variables usually happen when the child works alone or with other children. These latter variables are positively correlated with each other.

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2. The Relationship of Teacher Background and Teacher Education Program Variables to Teacher Performance Variables

Based on the analysis of the relationship of teacher performance variables to pupil learning variables, it was concluded that there were a number of solid linkages between teacher performance and pupil learning. Consequently, an analysis of the relationship of teacher background and Teacher Corps program variables to teacher performance variables was justified in that it was shown that the teacher performance variables were indeed related to pupil learning and growth. In addition, it was shown that a wide range of the teacher performance variables were significantly related to at least one pupil variable. Consequently it was important to relate teacher background and training to many of the teacher performance variables. To simplify and focus this analysis the teacher background and Teacher Corps program variables were related to the seven clusters of teacher performance variables as defined in Section II-B.

The discussion of these relationships will be based upon an analysis of correlations between teacher background and Teacher Corps program variables, and the teacher performance clusters. These relationships were also examined using discriminant analysis and multiple linear regression, however, the correlations provide the most comprehensive view of the relationships in question.

Table 11 presents correlations between teacher background and Teacher Corps program variables and the first teacher performance cluster, i.e., teacher utilization of community resources. Tables 12-16 relate teacher background and training to teacher action as a change agent in the school, lesson planning and materials development, classroom performance, i.e., affective tone and teacher response strategies. There were no correlations with teacher perceptions of problems related to schooling that were worthy of presentation and discussion.

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Table 11

Teacher Corps Program Variables That Correlate With Teacher Utilization Of Community Resources

Teacher Corps Program Variable		Correlation
1.3	Percent of White Interns	.24
1.5	Team Leader/Intern Ratio	-.26
2.3	Extent of Low-Income/Minority Focus in Regular School of Education Program	-.35
2.6	Total Enrollment at IHE	-.35
4.8	Intern Learned Most From Team Leader	.28
4.9	Intern Learned Most From Project Director	-.32
4.11	Staff Perceives Reading Failure as Due to Teacher	-.32
5.3	Intern Selection Procedure: Number of Strategies Used to Contact Hard-to-Contact Groups	-.31
5.4	Intern Selection Procedure: Academic Requirements Were Used	.28
5.5	Intern Selection Procedure: Communication is Formal; Selection Process is Narrow-Based; Criteria Emphasize Academic Ability	.26
7.3	Competencies Used in Training Interns	-.29
8.3	Intern Chooses Elective Courses but Isn't Accepted or in Contact With Project Staff	-.27
8.4	Intern Feels Accepted in Public School Setting	.22

Table 11 Continued

Teacher Corps Program Variable		Correlation
9.2	Intern on Teaching Team Where Team Leader is Master Teacher; School Environment Allows Interns to Bring About Change Outside Their Classroom	.26
9.4	Extent that Cooperating Teacher Participates in Overall Design	-.30
11.3	Extent of University Involvement in Community Component	.28
11.4	Hours Per Week and Diversity of Community Component	.33
13.3	Follow-up of Academic Instruction in School Setting	-.34
14.1	Extent of Discontinuity of Project Staffing	.29
14.3	Extent of Cooperative Decision-Making as Seen by Project Staff	-.35

Table 12

Teacher Corps Program Variables That Correlate With Teacher Action As A Change Agent In The School

	Teacher Corps Program Variable	Correlation
1.5	Team Leader/Intern Ratio	-.24
2.3	Extent of Low-Income/Minority Focus in Regular School of Education Program	-.26
4.8	Intern Learned Most From Team Leader	.23
4.9	Intern Learned Most From Project Director	-.26
4.14	Staff Explains Poverty as Problem with Individual or with Fate	-.29
7.2	Amount of Simulation/Feedback Training Used	-.23
7.3	Competencies Used in Training Interns	-.31
9.2	Intern on Teaching Team Where Team Leader is Master Teacher	.25
10.6	Percent of Black Staff in Public School	-.22
14.2	Extent of Cooperative Decision-Making at Project as Seen by Principal	.22
14.3	Extent of Cooperative Decision-Making as Seen by Project Staff	-.31

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As shown in Tables 11 and 12, a similar pattern of Teacher Corps program variables are correlated with both teacher utilization of community resources and teacher action as a change agent in the school. In both cases, graduates who excelled in these two areas of teacher performance came from Teacher Corps projects where the team leader to intern ratio was low and where interns felt they learned most from the team leader rather than the project director or other staff. However, neither of the teacher performance clusters was related to the ethnicity of the team leader during training. Correlations between these two teacher performance clusters and the proportion of white, chicano or black team leaders at a project were always less than r=.06.

The two teacher performance variables were not significantly correlated with whether the team leader was employed in the school district prior to working on the Teacher Corps project. However, teacher action as a change agent was negatively correlated with the team leader's years of teaching experience with low-income children. The teacher performance clusters were also related to several attitudes held by the project staff in general. Teacher utilization of community resources was facilitated when the project staff saw reading development in children as being due to pupil rather than teacher efforts. Earlier in this report, this same attitude on the part of Teacher Corps graduates was reported to be positively related to maximizing both reading and self-concept gain. Teacher action as a change agent was facilitated when the Teacher Corps graduate was associated with a project where the staff saw poverty as due to societal factors such as wages in industry, rather than individual factors such as lack of individual effort.

The teacher performance clusters were related to the amount of simulation feedback training and the use of competencies at the project. Both teacher utilization of community resources and teacher action as a change agent were negatively related to a training program that extensively used simulation feedback training or teacher competencies.

Both teacher performance clusters were positively related to a training situation where the team leader and interns worked as an independent team providing instruction to children and where the cooperating teachers did not participate in overall design of the program. Both teacher performance clusters were also facilitated by a low level of cooperative decision-making at the Teacher Corps project as seen by the project staff, although in the case of teacher action as a change agent, there was a positive correlation with cooperative decision-making as seen by the school principal.

Finally, teacher action as a change agent in the school was positively correlated with having been on a team during training that brought about change outside the classroom. A teacher's utilization of community resources was positively related to several features of the community component at the Teacher Corps project. This teacher performance cluster was positively related to the number of hours per week that the intern was involved with the community component and the extent to which university instructors were involved.

It is clear that team leaders play a critical role in the development of these teacher performances. Differences in team leader effectiveness were not related to team leader ethnicity nor to whether team leaders worked in the school district prior to joining Teacher Corps. Instead, team leader differences were associated with team operation in the school. Teams where team leader and interns operated independent of other school staff and were directly responsible for the instruction of children were also teams that brought about school-wide change. These teams helped develop interns who as graduates were proficient in utilizing community resources, initiating contact with parents, and acting as change agents in the school.

Table 13 presents correlations between Teacher Corps program variables and teacher lesson planning and materials development. It is harder to distinguish trends in these data than it was in the preceeding data. It does appear, however, that team leaders are again critical in the development of these teaching skills. Lesson planning and materials development tends to take place when the team leaders are the role group from which the graduates learned the most during training. Teachers also did extensive lesson planning and materials development when they received extensive clinical supervision during their training.. However, the amount of simulation feedback training received was once again negatively correlated with teacher performance.

Table 14 presents correlations between the Teacher Corps program variables and the teacher's affective tone in the classroom. This teacher performance cluster includes the extent of teacher/pupil interaction, the extent of positive teacher behavior and the range of teacher positive and negative behavior. Graduates who scored high on this teacher performance variable tended to come from undergraduate Teacher Corps projects where there was a considerable low-income minority group focus in the regular school of education curriculum. Moreover, they tended to receive more than average amounts of simulation feedback training, usually involving the use of video-tape machines and micro-teaching. Finally, they tended to come from projects where the project staff felt there had been considerable cooperative decision-making.

For the teacher performance cluster discussed previously, the amount of simulation feedback training was negatively related to the teacher performance cluster. This was true for teacher utilization of community resources, teacher action as a change agent, and teacher lesson planning and materials development. The correlation between amount of simulation feedback training and the teacher's affective

Table 13

Teacher Corps Program Variables That Correlate With Teacher Lesson Planning And Materials Development

Teacher Corps Program Variable		Correlation
1.5	Team Leader/Intern Ratio	-.24
1.8	Number of Previous Cycles of Teacher Corps	-.25
2.2	Positive Attitude of School of Education Toward Teacher Corps	-.28
2.3	Extent of Low-Income/Minority Focus in Regular School of Education Program	-.24
3.3	Per-Pupil Expenditure in District	.22
4.8	Intern Learned Most From Team Leader	.32
4.9	Intern Learned Most From Project Director	-.30
4.11	Staff Perceives Reading Failure as Due to Teacher	-.21
4.14	Staff Explains Poverty as Problem with Individual or Fate	-.27
5.1	Intern Selection Procedure: Communication is Informal; Selection Process is Broad-Based; Criteria: Potential Ability, Language Ability, Personality	-.25
7.2	Amount of Simulation/Feedback Training Used	-.30
8.3	Intern Chooses Elective Courses but Isn't Accepted or in Contact With Project Staff	-.25
9.5	Amount of Clinical Supervision Given to Intern	-.21

Table 13 Continued

Teacher Corps Program Variable		Correlation
11.1	Extent of Public School Staff Support of the Intern's Involvement in the Community Component	-.22
13.1	Length of Teacher Corps Program at this University	-.27
14.3	Extent of Cooperative Decision-Making as Seen by Project Staff	-.34
14.4	Frequency of Changes of Cooperating Schools and School Districts; Lack of Influence by LEA; Extent of Turnover in Dean, School of Education Role	.23

Table 14

Teacher Corps Program Variables That Correlate With Teacher Classroom Performance: Affective Tone

Teacher Corps Program Variable		Correlation
1.6	Project Is An Undergraduate Project	.24
2.3	Extent of Low-Income/Minority Focus in Regular School of Education Program	.28
5.3	Intern Selection Procedure: Number of Strategies Used to Contact Hard-to-Contact Groups	.24
6.2	Number of Credits and Percent of Credits Outside of School of Education	.31
7.2	Amount of Simulation/Feedback Training Used	.25
14.3	Extent of Cooperative Decision-Making as Seen by Project Staff	.39

tone in the classroom is positive, however, as it is for the next teacher performance variable, i.e., teacher response strategies in the classroom. This relationship is presented in Table 15.

Simulation-feedback training focused on teacher-pupil verbal interaction in the classroom. Consequently, it would make sense that teacher verbal interaction skills would improve. It isn't clear, however, why other teacher performance areas would suffer because simulation feedback training was used. It may be that these other areas were not given sufficient time in the training program. It may also be that simulation-feedback training, and the use of teacher competencies, communicates to interns that teacher-pupil verbal interaction is important rather than utilization of community resources, action as a change agent or the development of new instructional materials.

Table 16 presents Teacher Corps program characteristics that are significantly correlated with the extent that the teacher has individualized and personalized instruction for children. Included in this teacher performance cluster are two teacher performance variables, viz., the degree that instructional choices are given to pupils and the extent that pupils work independently or in small groups.

Graduates who individualized and personalized instruction for children tend to be from graduate level Teacher Corps projects with a large percentage of white interns. They tend to have learned more from their team leader than from the project director. They also were at projects where many of the courses were revised for use in the Teacher Corps project. In Phase I it was found that the bulk of the course revisions related to individualizing the instruction rather than to changing the course content.

The individualization and personalization of instruction for children was also related to having been at a Teacher Corps project

Table 15

Teacher Corps Program Variables That Correlate With Teacher Classroom Performance: Teacher Response Strategies

Teacher Corps Program Variable		Correlation
1.8	Number of Previous Cycles of Teacher Corps	-.27
2.3	Extent of Low-Income/Minority Focus in Regular School of Education Program	.37
2.4	Project's Perception of Extent of Goal Similarity and Cooperation with School of Education	.45
2.5	Cooperating IHE's are Public Institutions	.24
2.6	Total Enrollment at IHE	.58
3.3	Per-Pupil Expenditure in District	.26
4.2	Percent of Chicano Team Leaders	-.34
4.3	Percent of White Team Leaders	.34
4.4	Proportion of Teacher Corps Credits Taught by Black Instructors	.27
4.5	Proportion of Teacher Corps Credits Taught by Chicano Instructors	-.25
4.7	Years Team Leader Has Taught Low-Income Children	.24
4.10	Team Leader Employed by District Prior to Teacher Corps	.23
4.12	Staff Perceives Reading Failure as Due to Student or Environment	.47
4.13	Staff Explains Poverty as Structural Problem in Society	.33
4.14	Staff Explains Poverty as Problem with Individual or with Fate	-.33

Table 15 Continued

Teacher Corps Program Variable		Correlation
5.1	Intern Selection Procedure: Communication is Informal; Selection Process is Broad-Based; Criteria: Potential Ability, Language Ability, Personality	-.36
5.3	Intern Selection Procedure: Number of Strategies Used to Contact Hard-to-Contact Groups	.56
6.2	Number of Credits and Percent of Credits Outside of School of Education	.23
8.1	Extent That Intern Feels Accepted Within Project	-.21
8.3	Intern Chooses Elective Courses but Isn't Accepted or in Contact with Project Staff	.35
8.4	Intern Feels Accepted in Public School Setting	-.35
9.2	Intern is on Teaching Team Where Team Leader is Master Teacher; School Environment Allows Interns to Bring About Change Outside Their Classroom	-.21
9.4	Extent that Cooperating Teacher Participates in Overall Design	.45
10.3	Percent of Chicano Pupils and Staff in Public School	-.29
11.2	Extent and Perceived Helpfulness of Supervision in the Community Component	-.29
11.4	Hours Per Week and Diversity of Community Component	-.49
11.5	Variety of Groups and Agencies Involved in Supervision of Community Component	.44

Table 15 Continued

Teacher Corps Program Variable		Correlation
12.2	Variety of Data Collection Methods Used in Conducting Project Evaluation	.28
13.3	Follow-up of Academic Instruction in School Setting	.24
14.1	Extent of Discontinuity of Project Staffing	-.28
14.2	Extent of Cooperative Decision-Making at Project as Seen by Principal	-.36
14.4	Frequency of Changes of Cooperating Schools and School Districts; Lack of Influence by LEA; Extent of Turnover in Dean, School of Education	.44

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Table 16

Teacher Corps Program Variables That Correlate With Individualization And Personalization Of Instruction For Children

Teacher Corps Program Variable		Correlation
1.3	Percent of White Interns	.24
1.6	Project Is An Undergraduate Project	-.23
2.3	Extent of Low-Income/Minority Focus in Regular School of Education Program	-.39
2.4	Project's Perception of Extent of Goal Similarity and Cooperation with School of Education	-.30
2.6	Total Enrollment at IHE	-.44
4.8	Intern Learned Most From Team Leader	.34
4.9	Intern Learned Most From Project Director	-.39
4.11	Staff Perceives Reading Failure as Due to Teacher	-.32
5.2	Intern Selection Procedure: Communication is Formal and Informal; Criteria: Personality, Background Experiences, Ethnic and Cultural Considerations	-.31
5.3	Intern Selection Procedure: Number of Strategies Used to Contact Hard-to-Contact Groups	-.37
5.4	Intern Selection Procedure: Academic Requirements Were Waived	.28
5.5	Intern Selection Procedure: Communication is Formal; Selection Process is Narrow-Based; Criteria Emphasize Ability	.33

Table 16 Continued

Teacher Corps Program Variable		Correlation
6.1	Extent of Course Revision for Teacher Corps Training	.27
6.2	Number of Credits and Percent of Credits Outside of School of Education	-.31
7.2	Amount of Simulation/Feedback Training Used	-.21
7.3	Competencies Used in Training Interns	-.33
8.3	Intern Chooses Elective Courses but Isn't Accepted or in Contact with Project Staff	-.27
8.4	Intern Feels Accepted in Public School Setting	.26
9.2	Intern is on Teaching Team Where Team Leader is Master Teacher; School Environment Allows Interns to Bring About Change Outside Their Classroom	.26
9.4	Extent that Cooperating Teacher Participates in Overall Design	-.29
11.4	Hours Per Week and Diversity of Community Component	.41
11.5	Variety of Groups and Agencies Involved in Supervision of Community Component	-.29
12.3	Variety of Role Groups that Gather Data and Use the Evaluation	-.28
13.3	Follow-up of Academic Instruction in School Setting	-.28
14.1	Extent of Discontinuity of Project Staffing	.23
14.3	Extent of Cooperative Decision-Making as Seen by Project Staff	-.34

where simulation/feedback training was not used extensively. In a similar way, this teacher performance cluster was negatively related to the extent that teacher competencies were used at the project.

Finally, individualization of instruction for children was related to several characteristics of the school setting. It was related to a situation where the team leader and interns worked as an independent team directly responsible for the instruction of pupils and where the cooperating teachers did not participate in the overall design of the project. Moreover, it was associated with an intern's feeling of acceptance within the school setting and probably within the context of the independent team. Once again the role of the team leader as leader of an independent teaching team is highly related to the development of this teaching skill.

3. The Relationship of Teacher Background and Teacher Education Program Variables to Pupil Variables

This part of the report examines the relationships between teacher background and teacher education program characteristics of the Teacher Corps graduates on the one hand and selected pupil characteristics on the other hand. Table 17 presents the significant results of a discriminant analysis with the 75 Teacher Corps program variables plus teacher sex and ethnicity as predictors of subgroup membership of teachers as defined by each of four pupil variables, namely, total reading (P3) total self-concept (P10) and two classroom interaction variables (P12 and P13). For example, this analysis will identify Teacher Corps program characteristics that are best able to predict whether a teacher had pupils who as a class were above average or below average in reading gain. Table 18 presents simple correlations between these same two sets of variables, i.e., each of the Teacher Corps program and background characteristic variables was correlated with each of the four pupil variables.

Table 17

Discriminant Analysis With Teacher Corps Program Characteristics As Predictors Of Pupil Variables

Pupil Variable		Teacher Corps Program Variables that are Good Predictors		p
P3	Total Reading	13.2	Extent to Which Goals are Known and Shared by Project Staff	<.05
		9.5	Amount of Clinical Supervision Given to Intern	<.025
		14.4	Frequency of Changes of Cooperating Schools and School Districts; Lack of Influence by LEA; Extent of Turnover in Dean, School of Education	<.05
P10	Total Self-Concept	7.3	Competencies Used in Training Interns	<.05
P12	Pupil Initiating Interaction with Teacher	11.2	Extent and Perceived Helpfulness of Supervision in the Community Component	<.001
		2.1	Percent of Minority Group Professors in School of Education	<.025
		14.4	Frequency of Changes of Cooperating Schools and School Districts; Lack of Influence by LEA; Extent of Turnover in Dean, School of Education	<.10
P13	Pupil Instructing Self or Other Pupils		None	

Table 18

Teacher Background And Teacher Corps Program Variables That Correlate With Pupil Variables

Pupil Variable	Correlation	Teacher Corps Program Variable	
P3 Total Reading		None	
P10 Total Self-Concept	-.28	4.1	Percent of Black Team Leaders
	.33	4.6	Proportion of Teacher Corps Credits Taught by White Instructors
	-.30	5.2	Intern Selection Procedure: Communication is Formal and Informal; Criteria: Personality, Background Experiences, Ethnic and Cultural Considerations
	.24	6.1	Extent of Course Revision for Teacher Corps Training
	-.26	6.2	Number of Credits and Percent of Credits Outside of School of Education
	-.25	7.2	Amount of Simulation/Feedback Training Used
	-.28	9.1	Similarity of Views Between Team Leader and Cooperating Teacher Regarding Goals of Teacher Corps, Curriculum Development and Supervision
	.30	10.1	Percent of White Pupils and Staff in Public School

Table 18 (Continued)

Pupil Variable	Correlation	Teacher Corps Program Variable	
P10 Total Self-Concept	-.36	11.2	Extent and Perceived Helpfulness of Supervision in the Community Component
	-.32	13.1	Length of Teacher Corps Program at this University
	.25	14.4	Frequency of Changes of Cooperating Schools and School Districts; Lack of Influence by LEA; Extent of Turnover in DSE Role
P12 Pupil Initiating Interaction with Teacher	.29	3.1	Number of Pupils per District
	.30	3.2	Percent of Low-Income Pupils in District
	.30	4.1	Percent of Black Team Leaders
	-.24	4.6	Proportion of Teacher Corps Credits Taught by White Instructors
	.23	4.9	Intern Learned Most From Project Director
	.40	4.11	Staff Perceives Reading Failure as Due to Teacher
	.27	5.3	Intern Selection Procedure: Number of Strategies Used to Contact Hard-to-Contact Groups
	-.42	6.1	Extent of Course Revision for Teacher Corps Training

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Table 18 (Continued)

Pupil Variable	Correlation	Teacher Corps Program Variable	
P12 Pupil Initiating Interaction with Teacher	.22	6.2	Number of Credits and Percent of Credits Outside of School of Education
	.33	8.2	Intern Feels He/She Can be Self-Directed
	-.29	9.2	Intern on Teaching Team Where Team Leader is Master Teacher; School Environment Allows Interns to Bring About Change Outside Their Classroom
	.31	9.4	Extent that Cooperating Teacher Participates in Overall Design
	-.22	10.1	Percent of White Pupils and Staff in Public School
	-.28	10.3	Percent of Chicano Pupils and Staff in Public School
	.29	10.7	Percent of Pupils in Title I Program at School
	.38	11.2	Extent and Perceived Helpfulness of Supervision in the Community Component
	.34	11.5	Variety of Groups and Agencies Involved in Supervision of Community Component
	.31	12.1	Comprehensiveness of Project Evaluation

Table 18 (Continued)

Pupil Variable	Correlation	Teacher Corps Program Variable
P12 Pupil Initiating Interaction with Teacher	.29	13.3 Follow-up of Academic Instruction in School Setting
	.40	13.4 University Professor's Knowledge of Overall Instruction Given Interns
	.21	14.3 Extent of Cooperative Decision-Making as Seen by Project Staff
P13 Pupil Instructing Self or Other Pupils	-.38	3.1 Number of Pupils per District
	-.32	3.2 Percent of Low-Income Pupils in District
	-.33	4.1 Percent of Black Team Leaders
	.24	4.5 Proportion of Teacher Corps Credits Taught by Chicano Instructors
	.22	4.6 Proportion of Teacher Corps Credits Taught by White Instructors
	-.24	4.7 Years Team Leader Has Taught Low-Income Children
	.31	4.8 Intern Learned Most From Team Leader
	-.32	4.9 Intern Learned Most From Project Director
	-.55	4.11 Staff Perceives Reading Failure as Due to Teacher

Table 18 (Continued)

Pupil Variable	Correlation	Teacher Corps Program Variable	
P13 Pupil Instructing Self or Other Pupils	-.26	5.3	Intern Selection Procedure: Number of Strategies Used to Contact Hard-to-Contact Groups
	.23	5.4	Intern Selection Procedure: Academic Requirements Were Waived
	.44	6.1	Extent of Course Revision for Teacher Corps Training
	-.21	6.2	Number of Credits and Percent of Credits Outside of School of Education
	-.30	8.2	Intern Feels He/She Can be Self-Directed
	.38	9.2	Intern on Teaching Team Where Team Leader is Master Teacher; School Environment Allows Interns to Bring About Change Outside Their Classroom
	-.38	9.4	Extent that Cooperating Teacher Participates in Overall Design
	.32	10.1	Percent of White Pupils and Staff in Public School
	.24	10.2	Extent of Intern Exposure to Innovative Teaching and Intern's Sense that School Staff Support His Efforts

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Table 18 (Continued)

Pupil Variable	Correlation	Teacher Corps Program Variable
P13 Pupil Instructing Self or Other Pupils	.27	10.3 Percent of Chicano Pupils and Staff in Public School
	-.29	10.7 Percent of Pupils in Title I Program at School
	-.42	11.2 Extent and Perceived Helpfulness of Supervision in the Community Component
	.29	11.3 Extent of University Involvement in Community Component
	.28	11.4 Hours Per Week and Diversity of Community Component
	-.31	11.5 Variety of Groups and Agencies Involved in Supervision of Community Component
	-.24	12.1 Comprehensiveness of Project Evaluation
	-.29	13.1 Length of Teacher Corps Program at this University
	-.33	13.3 Follow-up of Academic Instruction in School Setting
	-.51	13.4 University Professor's Knowledge of Overall Instruction Given Interns
	-.27	14.3 Extent of Cooperative Decision-Making as Seen by Project Staff

As shown in Table 18 , there were no teacher background or Teacher Corps program characteristics that were significantly correlated with total reading gain. Three Teacher Corps program characteristics, however, did effectively discriminate between teachers whose pupil made large reading gains and teachers whose pupils made small reading gains. These three are: the amount of clinical supervision which the intern received during his training, the extent to which the Teacher Corps projects' goals were known and shared by project staff and the lack of turnover in the cooperating schools and school districts. The sex or ethnic group of the teacher was not significantly related to reading gain.

A number of Teacher Corps program variables were related to total self-concept gain in pupils. Graduates whose pupils made large gains in self-concept were in Teacher Corps projects with many characteristics in common. These projects had a higher proportion of interns' courses which were taught by white instructors (r=.31) and more of the interns' courses were within the school of education (r=.26). These projects also had a lower percentage of black team leaders (r=-.28). These projects were also characterized by extensive revision of courses taken by interns (r=.24). Moreover, the program at these projects did not include the extensive use of simulation/feedback training (r=-.25) nor were teacher competencies used extensively.

Graduates who had pupils with large gains in self-concept also came from projects where there was a large percentage of white pupils in the cooperating schools (r=.30). There tended to be a low turnover in the number of schools and school districts that were cooperating with the project and interns tended not to feel accepted in these public school settings (r=-.28). No other variable which depicted the degree of personalization of the Teacher Corps program was related to self-concept gain in pupils. Finally, there was a negative relationship (r=-.30) between projects that emphasized an intern's background, ethnic and cultural factors as selection criteria, and graduates who had pupils with large self-concept gains.

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Teacher background and Teacher Corps program variables were also correlated with two pupil classroom interaction variables: pupil interacting with the teacher (P12) and pupil instructing self or other children (P13). These two pupil variables were negatively correlated with each other, yet this alone would not explain the very interesting pattern of correlations between these two variables and Teacher Corps program characteristics. Many Teacher Corps program variables are correlated with these two variables and in almost every case, the same Teacher Corps program variable is correlated with both pupil variables. Moreover, the correlations are always in the opposite direction so that a Teacher Corps program variable that is negatively correlated with pupil interacting with teacher (P12) is positively correlated with pupil instructing self or other children (P13). The results are summarized in Table 19 .

Several conclusions can be drawn from these data. First, there are definite patterns of relationship between the Teacher Corps program variables and total self-concept gain (P3), pupil initiating interaction with teacher (P12), and pupil instructing self or other children (P13). There were no clear patterns of relationship between Teacher Corps program characteristics and total reading gain.

A second conclusion is that the pupil self-concept gain is most associated with the graduate having been at a Teacher Corps project where interns were instructed by white instructors within the school of education. Courses taught to interns at these projects were extensively revised but did not include extensive use of simulation/feedback training or teacher competencies. Finally, interns at these projects taught in schools with a high percentage of white pupils, yet interns did not feel accepted in the school setting. To gather information about whether an intern felt accepted in the school setting, the intern was asked whether he/she felt accepted as an individual by cooperating teachers, by other school staff members

Table 19

A Comparison Of Correlations Between Teacher Corps Program Variables and Two Pupil Variables

	Teacher Corps Program Variables	Correlation with Pupil Initiating Interaction with Teacher	Correlation with Pupil Instructing Self or Other Children
3.1	Number of Pupils per District	.29	-.38
3.2	Percent of Low-Income Pupils in District	.30	-.32
4.1	Percent of Black Team Leaders	.30	-.33
4.5	Proportion of Teacher Corps Credits Taught by Chicano Instructors	NS*	.22
4.6	Proportion of Teacher Corps Credits Taught by White Instructors	-.24	.22
4.7	Years Team Leader Has Taught Low-Income Children	NS	-.24
4.8	Intern Learned Most From Team Leader	NS	.31
4.9	Intern Learned Most From Project Director	.23	-.32
4.11	Staff Perceives Reading Failure as Due to Teacher	.40	-.55
5.4	Intern Selection Procedure: Academic Requirements Were Waived	NS	.23
6.1	Extent of Course Revision for Teacher Corps Training	-.42	.44
6.2	Number of Credits and Percent of Credits Outside of School of Education	.22	-.21
8.2	Intern Feels He/She Can be Self-Directed	.33	-.30
9.2	Intern is on Teaching Team Where Team Leader is Master Teacher; School Environment Allows Interns to Bring About Change Outside Their Classroom	-.29	.38

*Correlation was not significant.

Table 19 (Continued)

Teacher Corps Program Variables		Correlation with Pupil Initiating Interaction with Teacher	Correlation with Pupil Instructing Self or Other Children
9.4	Extent that Cooperating Teacher Participates in Overall Design	.31	-.38
10.1	Percent of White Pupils and Staff in Public School	-.22	.32
10.2	Extent of Intern Exposure to Innovative Teaching and Intern's Sense that School Staff Support His Efforts	NS	.24
10.3	Percent of Chicano Pupils and Staff in Public School	-.28	.27
10.7	Percent of Pupils in Title I Program at School	.29	-.29
11.2	Extent and Perceived Helpfulness of Supervision in the Community Component	.38	-.42
11.3	Extent of University Involvement in Community Component	NS	.29
11.4	Hours Per Week and Diversity of Community Component	NS	.28
11.5	Variety of Groups and Agencies Involved in Supervision of Community Component	.33	-.31
12.1	Comprehensiveness of Project Evaluation	.31	-.24
13.1	Length of Teacher Corps Program at this University	NS	-.29
13.3	Follow-up of Academic Instruction in School Setting	.29	-.33
13.4	University Professor's Knowledge of Overall Instruction Given Interns	.40	-.51
14.3	Extent of Cooperative Decision-Making as Seen by Project Staff	.21	-.27

and by other interns on the teaching team. It is interesting to note that graduates in the Phase II sample who were most effective in aiding both reading and self-concept development in pupils felt isolated and powerless in the school setting.[17] Self-concept gain was also related, as discussed above, to graduates who were in Teacher Corps projects where interns didn't feel accepted in the school setting.

Finally it can be concluded that two pupil variables, pupil initiating contact with teacher and pupil instructing self or other children are closely related to the same set of Teacher Corps program variables. This consistent pattern of relationship between these pupil variables and Teacher Corps program characteristics strongly suggests that teacher training does make a difference on pupil behavior in the classroom and on related teacher performance. This conclusion can be generalized to include the positive relationship of Teacher Corps training to pupil self-concept development.

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[17] This idea will be discussed again in the next section of the report.

D. An Assessment of the Relationship of School Climate Variables to Teacher Performance and Teacher Effectiveness

1. Comparison of Teacher Corps Graduates and Controls on the School Climate Variables

The school climate variables describe several conditions in the school which may influence the performance and effectiveness of the teachers in the study. The school climate variables used in the study are:

- The percentage of low-income students at the school (SC1).
- The extent that the teacher receives curriculum materials and ideas from other school staff (SC2).
- The degree of similarity of ideas about curriculum and discipline between the teacher and other school staff (SC3).
- The extent that the teacher feels isolated and powerless in the school setting (SC4).

Teacher Corps graduates were compared with control teachers on each of these variables. The results of this comparison are presented in Table 20.

Both Teacher Corps graduates and control teachers taught in schools where the majority (55% in both cases) of the children were from low income families. In this analysis, a low income family was defined as having an annual income of less than $6,000. There was no significant difference between the two groups of teachers on this variable (SC1).

Table 20

Comparison of Teacher Corps and Control Teachers on the School Climate Variables

Variable		Teacher Corps Mean	Teacher Corps S. D.	Teacher Corps Mean	Teacher Corps S. D.	t	p
SC1	Percentage of Low-Income Students at the School	55.23	32.11	55.58	31.72	-0.07	NS
SC2	Extent that Teacher Receives Curriculum Materials and Ideas from Other School Staff	2.35	1.00	2.73	1.08	-2.25	.025
SC3	Degree of Similarity of Ideas About Curriculum and Discipline Between the Teacher and Other School Staff	2.91	.68	3.20	.68	-2.68	.01
SC4	Extent that the Teacher Feels Isolated and Powerless in the School Setting	2.42	.69	2.45	.62	-0.36	NS

The Teacher Corps graduates and control teachers were significantly different on two school climate variables. Teacher Corps graduates received fewer ideas and curriculum materials from other school staff (SC2). The graduates also perceived that their views about curriculum and discipline were more divergent from the views of other teachers than were the views of control teachers (SC3). Stated differently, each teacher in the study rated the degree of similarity between his own views and the views held by other staff at the school on various curriculum and discipline issues. In general, the control teachers perceived their views as being more similar to the views held by other school staff than did the Teacher Corps graduates. Finally, there was no significant difference between the two groups of teachers in terms of the extent to which the teacher felt isolated and powerless in the school setting (SC4).

Several conclusions can be drawn from these data. In schools served by Sixth-Cycle Teacher Corps graduates, the majority of pupils (55%) were from low-income families. Moreover, there was no significant difference between Teacher Corps graduates and controls in terms of the percentage of pupils in the school who were from low-income families. This finding was anticipated given that control group teachers were selected because they were teaching the same type of child in the same school or at least the same school district. The lack of a significant difference between groups of teachers on this variable only means that the teachers were well matched in terms of pupil socioeconomic status.

A second conclusion is that the Teacher Corps graduates received fewer ideas and curriculum materials from other school staff than did control teachers. This could have happened for several reasons. The graduates may have been better prepared to work with inner city children, or at least they felt they were, so that they didn't need or seek out ideas and materials from other school staff. A second possible explanation is that graduates didn't receive as many ideas and materials because their views about curriculum and discipline were more divergent from the views held by other school staff than were the views held by the control teachers. The extent to which a teacher received materials and ideas from other teachers was highly correlated ($r=.45$) with the similarity of views between that teacher and other teachers at the school.

Two possible explanations for the difference between graduates and controls on the extent to which teacher receives curriculum materials and ideas from other school staff can be ruled out, however. Differences between graduates and controls in terms of ideas and materials received from other school staff do not appear to be related to the degree of isolation and powerlessness which a teacher feels in the school setting (SC4). There was no significant difference between graduates and controls on this variable (SC4) and its correlation with (SC2), the extent to which a teacher receives ideas and materials from other school staff, is low (r=.04). A second potential explanation is that differences in ideas and materials received are a result of differences in exposure to team teaching. This explanation can also be ruled out because graduates and controls did not differ on the degree to which they were involved in team planning or teaching (TP6).

A third conclusion relates to the similarity of views, as perceived by the teacher, between himself and other teachers at the school. Control teachers rated their views about curriculum and discipline as being somewhat similar to the views of other teachers at the school. Teacher Corps graduates rated their views as being somewhat different from the views of other teachers.

A fourth conclusion drawn from these data is that Teacher Corps graduates and controls did not differ in terms of the extent to which the teacher felt isolated and powerless in the school setting. This variable was measured by a Likert-type scale (the response categories were: strongly agree, agree, disagree, strongly disagree) with the following two items:

- "I am just a cog in the wheel at this school."
- "I don't feel close to other teachers at this school."

These items define an isolated and powerless individual teacher. However, teachers could also feel alienated from the school system administration yet feel unified and powerful, perhaps through membership in a teacher union, or by some other form of collective action. This collective sense of alienation was not studied directly although it was clearly a powerful force in some school districts included in the study. In one district, for example, the spring data collection was delayed because first year teachers were engaged in a lawsuit related to their dismissal due to budget cut-backs.

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Finally, both graduates and controls had group mean scores that were very close to the theoretical mid-point of the scale measuring an individual teacher's sense of isolation and powerlessness. One could infer from this that neither graduates nor controls believed they were especially isolated or powerless as individual teachers, however, it would be interesting to compare graduates with a broader-based sample of teachers on this variable. This is not to say that teachers did or did not feel alienated in a collective sense.

2. Correlation with School Climate Variables

Table 21 presents school climate variables that are significantly correlated with teacher performance and pupil variables. These correlations suggest school climate conditions under which teachers are especially effective or ineffective.

The percentage of low income students at the school (SC1) is significantly correlated with two teacher performance variables. Teachers at schools with a high percentage of pupils from low income families spend a greater proportion of their time dealing with pupil behavioral problems (TP 21; r = .23). Teachers at these schools also gave less praise to the children (TP14; r=-.21).

Table 21

Correlations Between School Climate and Teacher Performance or Pupil Variables

School Climate Variable SC	Correlation Coefficient	Teacher Performance or Pupil Variable
SC1 Percentage of Low-Income Students at the School	-.21	TP14 Teacher Gives Praise
	.23	TP21 Extent of Attention Given to Pupil Behavior Problems
	.22	P4 Good Behavior
	.22	P10 Total Self-concept Gain
	-.37	P11 Pupil School Attendance
SC2 Extent that Teacher Receives Curriculum Materials and Ideas from Other School Staff	.25	TP1 Teacher Utilizes School and Community Resources
	.23	TP4 Teacher Practice of Bringing About Change in the School
	.41	TP6 Teacher Plans Lessons with Teaching Team
	.43	TP8 Extent of Teacher/Pupil Interaction
	-.21	TP11 Teacher Asks Open-ended Questions
	.22	TP16 Degree that instructional Choices are Given to Pupils

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Table 21 (Continued)

School Climate Variable SC	Correlation Coefficient	Teacher Performance or Pupil Variables
SC2 (Continued)	.21	P4 Good Behavior
SC3 Degree of Similarity of Ideas About Curriculum and Discipline Between the Teacher and Other School Staff	-.29	TP1 Teacher Utilizes School and Community Resources
	.43	TP8 Extent of Teacher/Pupil Interaction
	-.53	TP17 Extent that Pupils Work Independently or in Small Groups
	.26	P2 Reading Gain
	.26	P3 Total Reading Gain
	.24	P13 Pupil Instructing Self or Other Pupils
SC4 Extent that the Teacher Feels Isolated and Powerless in the School Setting	.23	TP1 Teacher Utilizes School and Community Resources
	.30	TP3 Teacher Perception of Importance of Bringing About Change in the School
	.23	TP5 Teacher Introduces Culturally Relevant New Curriculum

Table 21 (Continued)

School Climate Variable	Correlation Coefficient	Teacher Performance or Pupil Variables	
SC4 Extent that the teacher feels isolated and powerless in the school setting (continued)	-.25	TP6	Teacher Plans Lesson with Teaching Team
	-.34	TP8	Extent of Teacher/Pupil Interaction
	.36	TP17	Extent that Pupils Work Independently or in Small Groups
	-.21	P1	Word Knowledge Gain
	-.23	P3	Total Reading Gain
	.35	P5	School Status
	.24	P10	Total Self-Concept Gain
	-.20	P13	Pupil Instructing Self or Other Pupils

The percentage of low-income students at the school was also significantly correlated with several pupil variables. Teachers at schools with a high percentage of low-income pupils were able to have a greater influence on the total self-concept gain of their pupils (P10; r=.22). As could be expected, pupils in schools with a large percentage of low-income pupils had a higher rate of absenteeism than did pupils in more middle class schools (P11; r=-.37).

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The extent to which the teacher receives curriculum materials and ideas from other school staff (SC2) was significantly correlated with a number of teacher performance variables. This variable was positively associated with the extent to which the teacher was involved in team planning (TP6; r=.41); the extent of teacher/pupil interaction (TP8; r=.43) and the utilization of school and community resources in teaching (TP1; r=.25). The extent to which the teacher received curriculum materials and ideas from other teachers was also positively correlated with the extent to which pupils display happiness or feelings of self-worth (P14; r=.21).

The teacher's perception of the degree of similarity of ideas between himself and other school staff (SC3) was positively related to the extent of teacher/pupil interaction (TP8; r=.43) and was inversely related to the extent to which pupils worked independently (TP17; r=-.53). It was also negatively related to the extent to which the teacher utilized community resources in his teaching (TP1; r=-.29).

The degree of similarity of ideas between the teacher and other teachers at the school was also significantly related to several pupil variables. It was positively related to total reading gain (P3; r=.26) and to the extent pupils were instructing themselves or other pupils (P13; r=.13).

The last school climate variable was the extent to which the teacher felt isolated and powerless in the school setting (SC4). This variable was

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positively related to the extent the teacher used community resources in his teaching (TP1; r=.23), the extent the teacher perceives that institutional change is needed at the school (TP3; r=.30) and the extent the teacher introduced culturally relevant new curricula (TP5; r=.23). The variable was negatively related to the extent the teacher was involved in team planning (TP6; r=-.25) and the extent of teacher/pupil interaction (TP8; r=-.34).

The extent to which the teacher felt isolated and powerless in the school setting was negatively related to reading gains in pupils. It was negatively related to word knowledge gain (P1; r=-.21) and to total reading gain (P3; r=-.23). However, the variable was positively correlated with total self-concept gain in pupils (P10; r =.24).

Several conclusions can be drawn about the relationship of the school climate variables to teacher performance or pupils variables. The first is that Teacher Corps graduates who teach in schools with a large percentage of low-income children tend to spend more time dealing with pupil behavior problems and praise children less often than do graduates who teach middle class children. Whatever one's beliefs are about the necessity of having to devote more time to behavioral problems in low-income schools, it is not necessary that teachers praise children less in these settings. However, it is appropriate to consider this finding in the light of a second conclusion, i.e., pupils in schools serving low-income families tend to have greater self-concept gains than do pupils in middle class schools. While this finding may be an artifact of the test or of regression toward the mean, it is equally likely to be a result of differences in teacher behavior interacting with pupil needs and background characteristics. A further analysis of the conditions under which self-concept growth is maximized is needed.

A rather predictable conclusion can be drawn from an analysis of the second school climate variable. The extent to which a teacher receives ideas and materials from other teachers is highly related (r=.43) to the extent of team planning involving that teacher. It should be pointed out that many graduates had to be excluded from this study because they taught on a teaching team where several teachers worked on reading with each child over the course of the year. In these cases there was no acceptable way to partition the effects of the various teachers; thus the graduate was excluded. In the context of this discussion, however, it can be argued that these teachers probably received even more ideas and assistance from other teachers than did teachers included in the study.

The third school climate variable is the degree of similarity of ideas between the teacher and other school staff in the areas of discipline and curricula. Many of the relationships between this variable and the teacher performance variables were further clarified by means of an analysis of data using canonical correlation. In this case, the analysis identified combinations of school climate variables and teacher performance variables. Specifically, a teacher who has views similar to other school staff (SC3) and who receives many ideas and curriculum materials from other teachers (SC2) tends also to be a teacher who interacts extensively with the pupils (TP8) but who doesn't allow children to work in small groups or alone (TP17) and doesn't give pupils praise for their efforts (TP14).[18] On the other hand, a teacher who has views similar to other school staff (SC3) and who feels isolated and powerless in the school setting (SC4) also tends to be a teacher who displays positive behavior toward children (TP9), who praises children a good deal (TP14) and who initiates interaction with parents (TP2).[19] This analysis has identified two types of teachers who tend to score high on the third school climate variable. It can be concluded that teachers who have views similar to other staff and who obtain ideas and materials from other staff also tend to be teachers who interact extensively with children but don't allow children to work in small groups and don't give much praise to children. On the other hand, teachers who have views similar to other staff and who feel isolated and powerless in the school setting tend to display positive behavior toward children, and to praise them.

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[18] The linear combination is: 1.0 (SC2) + .78 (SC3)=(correlation +.85)=1.0 (TP8) -.66 (TP17) -.61 (TP14).

[19] The linear combination is: 1.0 (SC4) +.65 (SC3)=(correlation +.63)=1.0 (TP9) +.73(TP2) +.73 (TP14).

Stated differently, teachers who individualize instruction for children, defined in terms of allowing children to work in small groups or individually and who praise children are teachers who don't obtain ideas or materials from other teachers and don't perceive their views as being similar to other teachers. An additional group of graduates also praise children a good deal. These are graduates who perceive their views as similar to those of other staff but who also feel isolated and powerless in the school setting. It is interesting that in both cases, praising of children is associated with a teacher's sense of being different from other teachers.

IV. SUMMARY OF FINDINGS AND CONCLUSIONS

The goals of Phase II of the study were:

1. To contrast the teacher performance and pupil learning gains of Teacher Corps graduates with those of control group teachers.

2. To analyze the relationship of teacher background, teacher education program, teacher performance and pupil performance for the Teacher Corps graduates.

3. To assess the effects of the professional support which Teacher Corps graduates and controls receive upon their teacher performance and effectiveness.

4. To compare Teacher Corps graduates included in Phase II with all graduates of projects studied in Phase I.

This summary is organized around these goals.

Goal 1: To contrast the teacher performance and pupil learning gains of Teacher Corps graduates with those of control group teachers.

Teacher Corps and control group teachers were compared on each of the teacher performance variables and on the clusters of teacher performance variables. The teacher performance variables were derived from the training goals of the twenty Teacher Corps projects which prepared these graduates.

Teacher Corps graduates were superior to control group teachers on many of the teacher performance variables desired by

Teacher Corps projects. The Teacher Corps graduates were most different from control group teachers in terms of:

- developing ethnically relevant curricula.
- using community resources in teaching and initiating contact with parents.
- positive attitudes about reading development and causes of poverty in the society.

These variables reflect a special concern about low income/minority group children on the part of the graduate. This emphasis is consistent with the training goals of many Sixth-Cycle Teacher Corps projects.

There was no difference between the two groups of teachers in terms of their perception of the importance of bringing about educational change in the school. In addition, there were no differences in their actual practice in attempting to bring about this change. There were also no differences between Teacher Corps graduates and controls on any teacher performance variable based on classroom observation of the teacher. More specifically, Teacher Corps graduates and controls did not differ in terms of the observed affective tone in the classroom, teacher questioning, structuring or response strategies or the degree of attention given pupil behavioral problems in the classroom. Thus, rather clear and consistent differences between Teacher Corps graduates and controls on such things as the introduction of culturally relevant materials or the use of community resources did not generalize to such areas as being a change agent in the school or the interaction between teacher and pupils in the classroom as assessed by the teacher performance measures used in the study.

Teacher effectiveness was assessed in terms of pupil growth in reading, self-concept, school attendance and selected classroom interaction variables. There were no significant differences between Teacher Corps and control group classes on any reading measure despite a greater emphasis on reading instruction and academic subject matter on the part of control group teachers in grades 2-3.

However, Teacher Corps graduates were able to bring about changes in a child's self-concept that were significantly greater than changes brought about by control group teachers. These changes consisted of observed expressions of greater happiness and greater self-worth in the classroom and better scores on important sub-scales of the self-concept scale.

Of particular importance were two sub-scales on the self-concept scale. These were two of three sub-scales on which pupils of Teacher Corps graduates scored significantly higher than did pupils of control group teachers. The first is a child's self-concept about his physical appearance and attributes. This sub-scale includes items such as "I am good looking", "I have a pleasant face", and "I have a bad figure".

Many children have real concerns about their body image and appearance. Children from many minority groups are often burdened with the additional problem of racial and ethnic discrimination related to physical characteristics. In this context, the minority group child's self-concept about his/her physical appearance is especially important but also is especially difficult to improve. Consequently, it is remarkable that Teacher Corps graduates could bring about significantly greater gain on this sub-scale within one school year.

The second sub-scale pertains to a child's feelings of happiness and satisfaction. Typical items from this sub-scale are "I am a happy person", "I like being the way I am", and "I wish I were different". These items are directly related to a child's satisfaction and happiness with himself. As such, this sub-scale may be more central to a child's attitude about himself than are several of the other sub-scales such as good behavior, intellectual and school status, and lack of anxiety.

Thus it is doubly unusual that Teacher Corps graduates could bring about significantly greater gain in pupils on both their attitude about their physical appearance and attributes and their sense of happiness and satisfaction with themselves.

Goal 2: To analyze the relationship of teacher background, teacher education program, teacher performance and pupil performance for the Teacher Corps graduates.

The most important findings concerning the relationship of teacher performance variables to pupil variables relate to reading and self-concept growth in pupils. This analysis identified two different types of teachers. The first type of teacher had pupils with large gains in both reading and self-concept development. The other type of teacher had pupils with large reading gains but very small gains in self-concept.

Unusually large pupil gains in both reading and self-concept were most closely associated with a teacher who perceived that reading development was primarily a function of pupil characteristics such as how hard the pupil tries rather than teacher characteristics such as how carefully the teacher plans the lesson. Unusually large gains were also associated with teachers who had a low level of teacher/pupil interaction and with the teacher's practice of bringing about change in the school, the teacher's practice of initiating contact with parents and the teacher's practice of planning lessons with a team of teachers.

Another set of teacher performance variables was related to unusually large reading gain coupled with unusually small self-concept gain. Such a combination of reading gain at the expense of self-concept gain was positively associated with a teacher who was highly directive in structuring the discussion and the classroom, and with a teacher who gave a good deal of corrective feedback to pupils. Reading gain at the expense of self-concept gain was also associated with a teacher who was below average in bringing about change in the school and who was below average in initiating contact with parents.

The most important findings concerning the relationship of teacher education program variables to teacher performance variables relate to two clusters of teacher performance variables. A similar pattern of teacher education variables were correlated with both teacher utilization of community resources and teacher action as a change agent in the school. In both cases, graduates who excelled in these two areas of teacher performance came from Teacher Corps projects where the team leader to intern ratio was low, and where interns felt they learned most from the team leader rather than the project director or other staff. However, neither teacher performance cluster was related to the ethnicity of the team leader during training. The two teacher performance variables were not significantly correlated with whether the team leader was employed in the district prior to working on the Teacher Corps project. However, teacher action as a change agent was negatively correlated with the team leader's years of teaching experience with low-income children.

The teacher performance clusters were related to several attitudes held by the project staff in general. Teacher utilization of community resources was facilitated when the project staff saw reading development in children as being due to pupil rather than teacher efforts. Earlier in this report, this same attitude on the part of Teacher Corps graduates was reported to be positively related to maximizing both reading and self-concept gain. Teacher action as a change agent was facilitated when the graduate was associated with a project where the staff saw poverty as due to societal factors such as wages in industry, rather than individual factors such as lack of individual effort.

Both teacher utilization of community resources and teacher action as a change agent were *negatively* related to a training program that extensively used simulation/feedback training or teacher competencies. Both teacher performance clusters were *positively* related to a training situation where the team leader and interns worked as an independent team providing instruction to children and where the cooperating teachers did *not* participate in the overall design of the program.

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Both teacher performance clusters were also facilitated by a low level of cooperative decision-making at the Teacher Corps project as seen by the project staff, although in the case of teacher action as a change agent, there was a positive correlation with cooperative decision-making as seen by the school principal.

Finally, teacher action as a change agent in the school was positively correlated with having been on a team during training that brought about change outside the classroom. A teacher's utilization of community resources was positively related to several features of the community component at the Teacher Corps project. This teacher performance cluster was positively related to the number of hours per week that the intern was involved with the community component and the extent to which university instructors were involved.

It is clear that team leaders play a critical role in the development of these teacher performances. Differences in team leader effectiveness were not related to team leader ethnicity nor to whether team leaders worked in the school district prior to joining Teacher Corps. Instead, team leader differences were associated with team operation in the school. Teams where team leader and interns operated independent of other school staff and were directly responsible for the instruction of children were also teams that brought about school-wide change. These teams helped develop interns who as graduates were proficient in utilizing community resources, initiating contact with parents, and acting as change agents in the school.

The teacher background and teacher education program variables also were related directly to the pupil variables. There were no teacher background or teacher education program characteristics that were significantly correlated with total reading gain.

A number of Teacher Corps program variables were related to total self-concept gain in pupils. Graduates whose pupils made

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large gains in self-concept were in Teacher Corps projects with many characteristics in common. These projects had a higher proportion of interns' courses which were taught by white instructors and more of the interns' courses were taught within the school of education. These projects were also characterized by extensive revision of courses taught to interns. However, the program at these projects did not include the extensive use of simulation/feedback training, nor were teacher competencies used extensively.

Graduates who had pupils with large gains in self-concept also came from projects where there was a large percentage of white pupils in the cooperating schools. There tended to be a low turnover in the number of schools and school districts that were cooperating with the project and interns tended not to feel accepted in these public school settings. None of the other variables which depicted the degree to which the Teacher Corps program was personalized for interns, however, were associated with self-concept gain.

Goal 3: To assess the effects of professional support which Teacher Corps graduates and controls receive upon their teacher performance and effectiveness.

The professional support variables describe several conditions in the school which may influence the performance and effectiveness of the teachers in the study. These variables are:

- The percentage of low-income students at the school.
- The extent to which the teacher receives curriculum materials and ideas from other school staff.
- The degree of similarity of ideas about curriculum and discipline between the teacher and other school staff.

- The extent to which the teacher feels isolated and powerless in the school setting.

Teacher Corps graduates were compared with control teachers on each of these variables.

In schools served by Sixth-Cycle Teacher Corps graduates, the majority of pupils (55%) were from low-income families. Moreover, there was no significant difference between Teacher Corps graduates and controls in terms of the percentage of pupils in the school who were from low-income families. This finding was anticipated, given that control group teachers were selected because they were teaching the same type of child in the same school, or at least the same school district. The lack of a significant difference between groups of teachers on this variable only means that the teachers were well matched in terms of pupil socioeconomic status.

The Teacher Corps graduates and control teachers were significantly different on two school climate variables. Teacher Corps graduates received fewer ideas and curriculum materials from other school staff. The graduates also perceived that their views about curriculum and discipline were more divergent from the views of other teachers than were the views of control teachers. Stated differently, each teacher in the study rated the degree of similarity between his own views and the views held by other staff at the school on various curriculum and discipline issues. In general, the control teachers perceived their views as being more similar to the views held by other school staff than did the Teacher Corps graduates. Finally, there was no significant difference between the two groups of teachers in terms of the extent to which the teacher felt isolated and powerless in the school setting.

The school climate variables were related to teacher performance and pupil variables. It was concluded that teachers who have views

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similar to other staff and who obtain ideas and materials from other staff also tend to be teachers who interact extensively with children but don't allow children to work in small groups and don't give much praise to children. On the other hand, teachers who have views similar to other staff and who feel isolated and powerless in the school setting tend to display positive behavior toward children, and to praise them.

Stated differently, teachers who individualize instruction for children, defined in terms of allowing children to work in small groups or individually and who praise children are teachers who don't obtain ideas or materials from other teachers and don't perceive their views as being similar to other teachers. An additional group of graduates also praise children a good deal. These are graduates who perceive their views as similar to those of other staff but who also feel isolated and powerless in the school setting. It is interesting that in both cases, praising of children is associated with a teacher's sense of being different from other teachers.

Goal 4: To compare Teacher Corps graduates included in Phase II with all graduates of projects studied in Phase I.

This analysis explored the relationship of the Phase II sample to the universe of Sixth-Cycle interns in terms of sex, ethnicity and project affiliation. The Phase II sample had essentially the same proportion of males and females as did the universe of Sixth-Cycle interns. Moreover, the proportion of black, white, chicano and other graduates in the Phase II sample was not significantly different from the proportions of these groups in the universe of interns. Fourteen of the 20 Teacher Corps projects had at least two interns in the Phase II sample and three projects had at least ten interns in the sample.

CLASSROOM OBSERVATION INSTRUMENT

Classroom Summary Information

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Teacher

School

City

Observer

Number Completed			
1	2	3	4

DIRECTIONS TO OBSERVERS:

1. Write "TEACHER FOCUS", "PUPIL 1-4", or "PUPIL 5-8" at the top of this page.
2. Record the number of FMO's completed by placing an "X" in each box under "Number Completed" above.

CLASSROOM CHECK LIST

(be sure to code EVERYONE in the class)

		(1) ONE CHILD	(2) TWO CHILDREN	(3) SMALL GROUPS	(4) LARGE GROUPS
01. Reading Silently	1-	T ① ② ③	T ① ② ③	T ① ② ③ ④	T ① ②
	2-	A ① ② ③	A ① ② ③	A ① ② ③ ④	A ① ②
	3-	I ① ② ③	I ① ② ③	I ① ② ③ ④	I ① ②
02. Spelling, Writing, Language Structure	1-	T ① ② ③	T ① ② ③	T ① ② ③ ④	T ① ②
	2-	A ① ② ③	A ① ② ③	A ① ② ③ ④	A ① ②
	3-	I ① ② ③	I ① ② ③	I ① ② ③ ④	I ① ②
03. Reading Comprehension	1-	T ① ② ③	T ① ② ③	T ① ② ③ ④	T ① ②
	2-	A ① ② ③	A ① ② ③	A ① ② ③ ④	A ① ②
	3-	I ① ② ③	I ① ② ③	I ① ② ③ ④	I ① ②
04. Pronunciation, Word Recognition, Listening, ESL	1-	T ① ② ③	T ① ② ③	T ① ② ③ ④	T ① ②
	2-	A ① ② ③	A ① ② ③	A ① ② ③ ④	A ① ②
	3-	I ① ② ③	I ① ② ③	I ① ② ③ ④	I ① ②
05. Arithmetic Drill	1-	T ① ② ③	T ① ② ③	T ① ② ③ ④	T ① ②
	2-	A ① ② ③	A ① ② ③	A ① ② ③ ④	A ① ②
	3-	I ① ② ③	I ① ② ③	I ① ② ③ ④	I ① ②
06. Number Concepts, Puzzles, Logic Games	1-	T ① ② ③	T ① ② ③	T ① ② ③ ④	T ① ②
	2-	A ① ② ③	A ① ② ③	A ① ② ③ ④	A ① ②
	3-	I ① ② ③	I ① ② ③	I ① ② ③ ④	I ① ②
07. Finding out about people and how they live	1-	T ① ② ③	T ① ② ③	T ① ② ③ ④	T ① ②
	2-	A ① ② ③	A ① ② ③	A ① ② ③ ④	A ① ②
	3-	I ① ② ③	I ① ② ③	I ① ② ③ ④	I ① ②
08. Finding out about the natural world	1-	T ① ② ③	T ① ② ③	T ① ② ③ ④	T ① ②
	2-	A ① ② ③	A ① ② ③	A ① ② ③ ④	A ① ②
	3-	I ① ② ③	I ① ② ③	I ① ② ③ ④	I ① ②
09. Grouptime, Sharing, Singing, Dancing	1-	T ① ② ③	T ① ② ③	T ① ② ③ ④	T ① ②
	2-	A ① ② ③	A ① ② ③	A ① ② ③ ④	A ① ②
	3-	I ① ② ③	I ① ② ③	I ① ② ③ ④	I ① ②
10. Arts, Crafts, Constructing Things	1	T ① ② ③	T ① ② ③	T ① ② ③ ④	T ① ②
	2-	A ① ② ③	A ① ② ③	A ① ② ③ ④	A ① ②
	3	I ① ② ③	I ① ② ③	I ① ② ③ ④	I ① ②
11. Transition, Classroom Management, Other	1-	T ① ② ③	T ① ② ③	T ① ② ③ ④	T ① ②
	2	A ① ② ③	A ① ② ③	A ① ② ③ ④	A ① ②
	3	I ① ② ③	I ① ② ③	I ① ② ③ ④	I ① ②

Observer Number 70 71	Activity 72 73	Focus Person 74	① Child ② Teacher	Number of Children 75	① ② ③ ④

Adult 76	Directing ①	Participating ②	Observing ③	Not Involved ④

TIME STARTED		
Hour	Minute	
○ ○ ○ ○ ○ ○ ○ ○ ○ ○	○ ○ ○ ○ ○ ○	○ ○ ○ ○ ○ ○ ○ ○ ○ ○

BEST COPY AVAILABLE

01	8 Who	9 To Whom	10 What	12 How	
Ⓡ	Ⓣ Ⓐ Ⓥ	Ⓣ Ⓐ Ⓥ	① ② ③ ④ ⑤	Ⓗ Ⓤ Ⓝ Ⓣ	14
	Ⓒ Ⓓ ②	Ⓒ Ⓓ ②	⑥ ⑦ ⑧ ⑨ ⑩	Ⓠ Ⓖ Ⓟ	17
Ⓒ	Ⓢ Ⓛ (AN) Ⓜ	Ⓢ Ⓛ (AN) Ⓜ	⑪ ⑫ (NV) Ⓧ	Ⓞ Ⓦ (DP)	Ⓐ Ⓑ
			11		21

2	22 Who	23 To Whom	24 What	26 How	
Ⓡ	Ⓣ Ⓐ Ⓥ	Ⓣ Ⓐ Ⓥ	① ② ③ ④ ⑤	Ⓗ Ⓤ Ⓝ Ⓣ	28
	Ⓒ Ⓓ ②	Ⓒ Ⓓ ②	⑥ ⑦ ⑧ ⑨ ⑩	Ⓠ Ⓖ Ⓟ	31
Ⓒ	Ⓢ Ⓛ (AN) Ⓜ	Ⓢ Ⓛ (AN) Ⓜ	⑪ ⑫ (NV) Ⓧ	Ⓞ Ⓦ (DP)	Ⓐ Ⓑ
			25		35

3	36 Who	37 To Whom	38 What	40 How	
Ⓡ	Ⓣ Ⓐ Ⓥ	Ⓣ Ⓐ Ⓥ	① ② ③ ④ ⑤	Ⓗ Ⓤ Ⓝ Ⓣ	42
	Ⓒ Ⓓ ②	Ⓒ Ⓓ ②	⑥ ⑦ ⑧ ⑨ ⑩	Ⓠ Ⓖ Ⓟ	45
Ⓒ	Ⓢ Ⓛ (AN) Ⓜ	Ⓢ Ⓛ (AN) Ⓜ	⑪ ⑫ (NV) Ⓧ	Ⓞ Ⓦ (DP)	Ⓐ Ⓑ
			39		49

4	50 Who	51 To Whom	52 What	54 How	
Ⓡ	Ⓣ Ⓐ Ⓥ	Ⓣ Ⓐ Ⓥ	① ② ③ ④ ⑤	Ⓗ Ⓤ Ⓝ Ⓣ	56
	Ⓒ Ⓓ ②	Ⓒ Ⓓ ②	⑥ ⑦ ⑧ ⑨ ⑩	Ⓠ Ⓖ Ⓟ	59
Ⓒ	Ⓢ Ⓛ (AN) Ⓜ	Ⓢ Ⓛ (AN) Ⓜ	⑪ ⑫ (NV) Ⓧ	Ⓞ Ⓦ (DP)	Ⓐ Ⓑ
			53		63

5	64 Who	65 To Whom	66 What	68 How	
Ⓡ	Ⓣ Ⓐ Ⓥ	Ⓣ Ⓐ Ⓥ	① ② ③ ④ ⑤	Ⓗ Ⓤ Ⓝ Ⓣ	70
	Ⓒ Ⓓ ②	Ⓒ Ⓓ ②	⑥ ⑦ ⑧ ⑨ ⑩	Ⓠ Ⓖ Ⓟ	73
Ⓒ	Ⓢ Ⓛ (AN) Ⓜ	Ⓢ Ⓛ (AN) Ⓜ	⑪ ⑫ (NV) Ⓧ	Ⓞ Ⓦ (DP)	Ⓐ Ⓑ
			67		77

06	8 Who	9 To Whom	10 What	12 How	
Ⓡ	Ⓣ Ⓐ Ⓥ	Ⓣ Ⓐ Ⓥ	① ② ③ ④ ⑤	Ⓗ Ⓤ Ⓝ Ⓣ	14
	Ⓒ Ⓓ ②	Ⓒ Ⓓ ②	⑥ ⑦ ⑧ ⑨ ⑩	Ⓠ Ⓖ Ⓟ	17
Ⓒ	Ⓢ Ⓛ (AN) Ⓜ	Ⓢ Ⓛ (AN) Ⓜ	⑪ ⑫ (NV) Ⓧ	Ⓞ Ⓦ (DP)	Ⓐ Ⓑ
			11		21

7	22 Who	23 To Whom	24 What	26 How	
Ⓡ	Ⓣ Ⓐ Ⓥ	Ⓣ Ⓐ Ⓥ	① ② ③ ④ ⑤	Ⓗ Ⓤ Ⓝ Ⓣ	28
	Ⓒ Ⓓ ②	Ⓒ Ⓓ ②	⑥ ⑦ ⑧ ⑨ ⑩	Ⓠ Ⓖ Ⓟ	31
Ⓒ	Ⓢ Ⓛ (AN) Ⓜ	Ⓢ Ⓛ (AN) Ⓜ	⑪ ⑫ (NV) Ⓧ	Ⓞ Ⓦ (DP)	Ⓐ Ⓑ
			25		35

8	36 Who	37 To Whom	38 What	40 How	
Ⓡ	Ⓣ Ⓐ Ⓥ	Ⓣ Ⓐ Ⓥ	① ② ③ ④ ⑤	Ⓗ Ⓤ Ⓝ Ⓣ	42
	Ⓒ Ⓓ ②	Ⓒ Ⓓ ②	⑥ ⑦ ⑧ ⑨ ⑩	Ⓠ Ⓖ Ⓟ	45
Ⓒ	Ⓢ Ⓛ (AN) Ⓜ	Ⓢ Ⓛ (AN) Ⓜ	⑪ ⑫ (NV) Ⓧ	Ⓞ Ⓦ (DP)	Ⓐ Ⓑ
			39		49

9	50 Who	51 To Whom	52 What	54 How	
Ⓡ	Ⓣ Ⓐ Ⓥ	Ⓣ Ⓐ Ⓥ	① ② ③ ④ ⑤	Ⓗ Ⓤ Ⓝ Ⓣ	56
	Ⓒ Ⓓ ②	Ⓒ Ⓓ ②	⑥ ⑦ ⑧ ⑨ ⑩	Ⓠ Ⓖ Ⓟ	59
Ⓒ	Ⓢ Ⓛ (AN) Ⓜ	Ⓢ Ⓛ (AN) Ⓜ	⑪ ⑫ (NV) Ⓧ	Ⓞ Ⓦ (DP)	Ⓐ Ⓑ
			53		63

10	64 Who	65 To Whom	66 What	68 How	
Ⓡ	Ⓣ Ⓐ Ⓥ	Ⓣ Ⓐ Ⓥ	① ② ③ ④ ⑤	Ⓗ Ⓤ Ⓝ Ⓣ	70
	Ⓒ Ⓓ ②	Ⓒ Ⓓ ②	⑥ ⑦ ⑧ ⑨ ⑩	Ⓠ Ⓖ Ⓟ	73
Ⓒ	Ⓢ Ⓛ (AN) Ⓜ	Ⓢ Ⓛ (AN) Ⓜ	⑪ ⑫ (NV) Ⓧ	Ⓞ Ⓦ (DP)	Ⓐ Ⓑ
			67		77

11	8 Who	9 To Whom	10 What	12 How	
Ⓡ	Ⓣ Ⓐ Ⓥ	Ⓣ Ⓐ Ⓥ	① ② ③ ④ ⑤	Ⓗ Ⓤ Ⓝ Ⓣ	14
	Ⓒ Ⓓ ②	Ⓒ Ⓓ ②	⑥ ⑦ ⑧ ⑨ ⑩	Ⓠ Ⓖ Ⓟ	17
Ⓒ	Ⓢ Ⓛ (AN) Ⓜ	Ⓢ Ⓛ (AN) Ⓜ	⑪ ⑫ (NV) Ⓧ	Ⓞ Ⓦ (DP)	Ⓐ Ⓑ
			11		21

12	22 Who	23 To Whom	24 What	26 How	
Ⓡ	Ⓣ Ⓐ Ⓥ	Ⓣ Ⓐ Ⓥ	① ② ③ ④ ⑤	Ⓗ Ⓤ Ⓝ Ⓣ	28
	Ⓒ Ⓓ ②	Ⓒ Ⓓ ②	⑥ ⑦ ⑧ ⑨ ⑩	Ⓠ Ⓖ Ⓟ	31
Ⓒ	Ⓢ Ⓛ (AN) Ⓜ	Ⓢ Ⓛ (AN) Ⓜ	⑪ ⑫ (NV) Ⓧ	Ⓞ Ⓦ (DP)	Ⓐ Ⓑ
			25		35

13	36 Who	37 To Whom	38 What	40 How	
Ⓡ	Ⓣ Ⓐ Ⓥ	Ⓣ Ⓐ Ⓥ	① ② ③ ④ ⑤	Ⓗ Ⓤ Ⓝ Ⓣ	42
	Ⓒ Ⓓ ②	Ⓒ Ⓓ ②	⑥ ⑦ ⑧ ⑨ ⑩	Ⓠ Ⓖ Ⓟ	45
Ⓒ	Ⓢ Ⓛ (AN) Ⓜ	Ⓢ Ⓛ (AN) Ⓜ	⑪ ⑫ (NV) Ⓧ	Ⓞ Ⓦ (DP)	Ⓐ Ⓑ
			39		49

14	50 Who	51 To Whom	52 What	54 How	
Ⓡ	Ⓣ Ⓐ Ⓥ	Ⓣ Ⓐ Ⓥ	① ② ③ ④ ⑤	Ⓗ Ⓤ Ⓝ Ⓣ	56
	Ⓒ Ⓓ ②	Ⓒ Ⓓ ②	⑥ ⑦ ⑧ ⑨ ⑩	Ⓠ Ⓖ Ⓟ	59
Ⓒ	Ⓢ Ⓛ (AN) Ⓜ	Ⓢ Ⓛ (AN) Ⓜ	⑪ ⑫ (NV) Ⓧ	Ⓞ Ⓦ (DP)	Ⓐ Ⓑ
			53		63

15	64 Who	65 To Whom	66 What	68 How	
Ⓡ	Ⓣ Ⓐ Ⓥ	Ⓣ Ⓐ Ⓥ	① ② ③ ④ ⑤	Ⓗ Ⓤ Ⓝ Ⓣ	70
	Ⓒ Ⓓ ②	Ⓒ Ⓓ ②	⑥ ⑦ ⑧ ⑨ ⑩	Ⓠ Ⓖ Ⓟ	73
Ⓒ	Ⓢ Ⓛ (AN) Ⓜ	Ⓢ Ⓛ (AN) Ⓜ	⑪ ⑫ (NV) Ⓧ	Ⓞ Ⓦ (DP)	Ⓐ Ⓑ
			67		77

16	8 Who	9 To Whom	10 What	12 How	
Ⓡ	Ⓣ Ⓐ Ⓥ	Ⓣ Ⓐ Ⓥ	① ② ③ ④ ⑤	Ⓗ Ⓤ Ⓝ Ⓣ	14
	Ⓒ Ⓓ ②	Ⓒ Ⓓ ②	⑥ ⑦ ⑧ ⑨ ⑩	Ⓠ Ⓖ Ⓟ	17
Ⓒ	Ⓢ Ⓛ (AN) Ⓜ	Ⓢ Ⓛ (AN) Ⓜ	⑪ ⑫ (NV) Ⓧ	Ⓞ Ⓦ (DP)	Ⓐ Ⓑ
			11		21

17	22 Who	23 To Whom	24 What	26 How	
Ⓡ	Ⓣ Ⓐ Ⓥ	Ⓣ Ⓐ Ⓥ	① ② ③ ④ ⑤	Ⓗ Ⓤ Ⓝ Ⓣ	28
	Ⓒ Ⓓ ②	Ⓒ Ⓓ ②	⑥ ⑦ ⑧ ⑨ ⑩	Ⓠ Ⓖ Ⓟ	31
Ⓒ	Ⓢ Ⓛ (AN) Ⓜ	Ⓢ Ⓛ (AN) Ⓜ	⑪ ⑫ (NV) Ⓧ	Ⓞ Ⓦ (DP)	Ⓐ Ⓑ
			25		35

18	36 Who	37 To Whom	38 What	40 How	
Ⓡ	Ⓣ Ⓐ Ⓥ	Ⓣ Ⓐ Ⓥ	① ② ③ ④ ⑤	Ⓗ Ⓤ Ⓝ Ⓣ	42
	Ⓒ Ⓓ ②	Ⓒ Ⓓ ②	⑥ ⑦ ⑧ ⑨ ⑩	Ⓠ Ⓖ Ⓟ	45
Ⓒ	Ⓢ Ⓛ (AN) Ⓜ	Ⓢ Ⓛ (AN) Ⓜ	⑪ ⑫ (NV) Ⓧ	Ⓞ Ⓦ (DP)	Ⓐ Ⓑ
			39		49

19	50 Who	51 To Whom	52 What	54 How	
Ⓡ	Ⓣ Ⓐ Ⓥ	Ⓣ Ⓐ Ⓥ	① ② ③ ④ ⑤	Ⓗ Ⓤ Ⓝ Ⓣ	56
	Ⓒ Ⓓ ②	Ⓒ Ⓓ ②	⑥ ⑦ ⑧ ⑨ ⑩	Ⓠ Ⓖ Ⓟ	59
Ⓒ	Ⓢ Ⓛ (AN) Ⓜ	Ⓢ Ⓛ (AN) Ⓜ	⑪ ⑫ (NV) Ⓧ	Ⓞ Ⓦ (DP)	Ⓐ Ⓑ
			53		63

20	64 Who	65 To Whom	66 What	68 How	
Ⓡ	Ⓣ Ⓐ Ⓥ	Ⓣ Ⓐ Ⓥ	① ② ③ ④ ⑤	Ⓗ Ⓤ Ⓝ Ⓣ	70
	Ⓒ Ⓓ ②	Ⓒ Ⓓ ②	⑥ ⑦ ⑧ ⑨ ⑩	Ⓠ Ⓖ Ⓟ	73
Ⓒ	Ⓢ Ⓛ (AN) Ⓜ	Ⓢ Ⓛ (AN) Ⓜ	⑪ ⑫ (NV) Ⓧ	Ⓞ Ⓦ (DP)	Ⓐ Ⓑ
			67		77

21	8 Who	9 To Whom	10 What	12 How	
Ⓡ	Ⓣ Ⓐ Ⓥ	Ⓣ Ⓐ Ⓥ	① ② ③ ④ ⑤	Ⓗ Ⓤ Ⓝ Ⓣ	14
	Ⓒ Ⓓ Ⓩ	Ⓒ Ⓓ Ⓩ	⑥ ⑦ ⑧ ⑨ ⑩	Ⓠ Ⓖ Ⓟ	17
Ⓒ	Ⓢ Ⓛ (AN) Ⓜ	Ⓢ Ⓛ (AN) Ⓜ	⑪ ⑫ (NV) Ⓧ	Ⓞ Ⓦ (OP)	Ⓐ Ⓑ
			11		21

22	22 Who	23 To Whom	24 What	26 How	
Ⓡ	Ⓣ Ⓐ Ⓥ	Ⓣ Ⓐ Ⓥ	① ② ③ ④ ⑤	Ⓗ Ⓤ Ⓝ Ⓣ	28
	Ⓒ Ⓓ Ⓩ	Ⓒ Ⓓ Ⓩ	⑥ ⑦ ⑧ ⑨ ⑩	Ⓠ Ⓖ Ⓟ	31
Ⓒ	Ⓢ Ⓛ (AN) Ⓜ	Ⓢ Ⓛ (AN) Ⓜ	⑪ ⑫ (NV) Ⓧ	Ⓞ Ⓦ (OP)	Ⓐ Ⓑ
			25		35

23	36 Who	37 To Whom	38 What	40 How	
Ⓡ	Ⓣ Ⓐ Ⓥ	Ⓣ Ⓐ Ⓥ	① ② ③ ④ ⑤	Ⓗ Ⓤ Ⓝ Ⓣ	42
	Ⓒ Ⓓ Ⓩ	Ⓒ Ⓓ Ⓩ	⑥ ⑦ ⑧ ⑨ ⑩	Ⓠ Ⓖ Ⓟ	45
Ⓒ	Ⓢ Ⓛ (AN) Ⓜ	Ⓢ Ⓛ (AN) Ⓜ	⑪ ⑫ (NV) Ⓧ	Ⓞ Ⓦ (OP)	Ⓐ Ⓑ
			39		49

24	50 Who	51 To Whom	52 What	54 How	
Ⓡ	Ⓣ Ⓐ Ⓥ	Ⓣ Ⓐ Ⓥ	① ② ③ ④ ⑤	Ⓗ Ⓤ Ⓝ Ⓣ	56
	Ⓒ Ⓓ Ⓩ	Ⓒ Ⓓ Ⓩ	⑥ ⑦ ⑧ ⑨ ⑩	Ⓠ Ⓖ Ⓟ	59
Ⓒ	Ⓢ Ⓛ (AN) Ⓜ	Ⓢ Ⓛ (AN) Ⓜ	⑪ ⑫ (NV) Ⓧ	Ⓞ Ⓦ (OP)	Ⓐ Ⓑ
			53		63

25	64 Who	65 To Whom	66 What	68 How	
Ⓡ	Ⓣ Ⓐ Ⓥ	Ⓣ Ⓐ Ⓥ	① ② ③ ④ ⑤	Ⓗ Ⓤ Ⓝ Ⓣ	70
	Ⓒ Ⓓ Ⓩ	Ⓒ Ⓓ Ⓩ	⑥ ⑦ ⑧ ⑨ ⑩	Ⓠ Ⓖ Ⓟ	73
Ⓒ	Ⓢ Ⓛ (AN) Ⓜ	Ⓢ Ⓛ (AN) Ⓜ	⑪ ⑫ (NV) Ⓧ	Ⓞ Ⓦ (OP)	Ⓐ Ⓑ
			67		77

26	8 Who	9 To Whom	10 What	12 How	
Ⓡ	Ⓣ Ⓐ Ⓥ	Ⓣ Ⓐ Ⓥ	① ② ③ ④ ⑤	Ⓗ Ⓤ Ⓝ Ⓣ	14
	Ⓒ Ⓓ Ⓩ	Ⓒ Ⓓ Ⓩ	⑥ ⑦ ⑧ ⑨ ⑩	Ⓠ Ⓖ Ⓟ	17
Ⓒ	Ⓢ Ⓛ (AN) Ⓜ	Ⓢ Ⓛ (AN) Ⓜ	⑪ ⑫ (NV) Ⓧ	Ⓞ Ⓦ (OP)	Ⓐ Ⓑ
			11		21

27	22 Who	23 To Whom	24 What	26 How	
Ⓡ	Ⓣ Ⓐ Ⓥ	Ⓣ Ⓐ Ⓥ	① ② ③ ④ ⑤	Ⓗ Ⓤ Ⓝ Ⓣ	28
	Ⓒ Ⓓ Ⓩ	Ⓒ Ⓓ Ⓩ	⑥ ⑦ ⑧ ⑨ ⑩	Ⓠ Ⓖ Ⓟ	31
Ⓒ	Ⓢ Ⓛ (AN) Ⓜ	Ⓢ Ⓛ (AN) Ⓜ	⑪ ⑫ (NV) Ⓧ	Ⓞ Ⓦ (OP)	Ⓐ Ⓑ
			25		35

28	36 Who	37 To Whom	38 What	40 How	
Ⓡ	Ⓣ Ⓐ Ⓥ	Ⓣ Ⓐ Ⓥ	① ② ③ ④ ⑤	Ⓗ Ⓤ Ⓝ Ⓣ	42
	Ⓒ Ⓓ Ⓩ	Ⓒ Ⓓ Ⓩ	⑥ ⑦ ⑧ ⑨ ⑩	Ⓠ Ⓖ Ⓟ	45
Ⓒ	Ⓢ Ⓛ (AN) Ⓜ	Ⓢ Ⓛ (AN) Ⓜ	⑪ ⑫ (NV) Ⓧ	Ⓞ Ⓦ (OP)	Ⓐ Ⓑ
			39		49

29	50 Who	51 To Whom	52 What	54 How	
Ⓡ	Ⓣ Ⓐ Ⓥ	Ⓣ Ⓐ Ⓥ	① ② ③ ④ ⑤	Ⓗ Ⓤ Ⓝ Ⓣ	56
	Ⓒ Ⓓ Ⓩ	Ⓒ Ⓓ Ⓩ	⑥ ⑦ ⑧ ⑨ ⑩	Ⓠ Ⓖ Ⓟ	59
Ⓒ	Ⓢ Ⓛ (AN) Ⓜ	Ⓢ Ⓛ (AN) Ⓜ	⑪ ⑫ (NV) Ⓧ	Ⓞ Ⓦ (OP)	Ⓐ Ⓑ
			53		63

30	64 Who	65 To Whom	66 What	68 How	
Ⓡ	Ⓣ Ⓐ Ⓥ	Ⓣ Ⓐ Ⓥ	① ② ③ ④ ⑤	Ⓗ Ⓤ Ⓝ Ⓣ	70
	Ⓒ Ⓓ Ⓩ	Ⓒ Ⓓ Ⓩ	⑥ ⑦ ⑧ ⑨ ⑩	Ⓠ Ⓖ Ⓟ	73
Ⓒ	Ⓢ Ⓛ (AN) Ⓜ	Ⓢ Ⓛ (AN) Ⓜ	⑪ ⑫ (NV) Ⓧ	Ⓞ Ⓦ (OP)	Ⓐ Ⓑ
			67		77

31	8 Who	9 To Whom	10 What	12 How	
Ⓡ	Ⓣ Ⓐ Ⓥ	Ⓣ Ⓐ Ⓥ	① ② ③ ④ ⑤	Ⓗ Ⓤ Ⓝ Ⓣ	14
	Ⓒ Ⓓ Ⓩ	Ⓒ Ⓓ Ⓩ	⑥ ⑦ ⑧ ⑨ ⑩	Ⓠ Ⓖ Ⓟ	17
Ⓒ	Ⓢ Ⓛ (AN) Ⓜ	Ⓢ Ⓛ (AN) Ⓜ	⑪ ⑫ (NV) Ⓧ	Ⓞ Ⓦ (OP)	Ⓐ Ⓑ
			11		21

32	22 Who	23 To Whom	24 What	26 How	
Ⓡ	Ⓣ Ⓐ Ⓥ	Ⓣ Ⓐ Ⓥ	① ② ③ ④ ⑤	Ⓗ Ⓤ Ⓝ Ⓣ	28
	Ⓒ Ⓓ Ⓩ	Ⓒ Ⓓ Ⓩ	⑥ ⑦ ⑧ ⑨ ⑩	Ⓠ Ⓖ Ⓟ	31
Ⓒ	Ⓢ Ⓛ (AN) Ⓜ	Ⓢ Ⓛ (AN) Ⓜ	⑪ ⑫ (NV) Ⓧ	Ⓞ Ⓦ (OP)	Ⓐ Ⓑ
			25		35

33	36 Who	37 To Whom	38 What	40 How	
Ⓡ	Ⓣ Ⓐ Ⓥ	Ⓣ Ⓐ Ⓥ	① ② ③ ④ ⑤	Ⓗ Ⓤ Ⓝ Ⓣ	42
	Ⓒ Ⓓ Ⓩ	Ⓒ Ⓓ Ⓩ	⑥ ⑦ ⑧ ⑨ ⑩	Ⓠ Ⓖ Ⓟ	45
Ⓒ	Ⓢ Ⓛ (AN) Ⓜ	Ⓢ Ⓛ (AN) Ⓜ	⑪ ⑫ (NV) Ⓧ	Ⓞ Ⓦ (OP)	Ⓐ Ⓑ
			39		49

34	50 Who	51 To Whom	52 What	54 How	
Ⓡ	Ⓣ Ⓐ Ⓥ	Ⓣ Ⓐ Ⓥ	① ② ③ ④ ⑤	Ⓗ Ⓤ Ⓝ Ⓣ	56
	Ⓒ Ⓓ Ⓩ	Ⓒ Ⓓ Ⓩ	⑥ ⑦ ⑧ ⑨ ⑩	Ⓠ Ⓖ Ⓟ	59
Ⓒ	Ⓢ Ⓛ (AN) Ⓜ	Ⓢ Ⓛ (AN) Ⓜ	⑪ ⑫ (NV) Ⓧ	Ⓞ Ⓦ (OP)	Ⓐ Ⓑ
			53		63

35	64 Who	65 To Whom	66 What	68 How	
Ⓡ	Ⓣ Ⓐ Ⓥ	Ⓣ Ⓐ Ⓥ	① ② ③ ④ ⑤	Ⓗ Ⓤ Ⓝ Ⓣ	70
	Ⓒ Ⓓ Ⓩ	Ⓒ Ⓓ Ⓩ	⑥ ⑦ ⑧ ⑨ ⑩	Ⓠ Ⓖ Ⓟ	73
Ⓒ	Ⓢ Ⓛ (AN) Ⓜ	Ⓢ Ⓛ (AN) Ⓜ	⑪ ⑫ (NV) Ⓧ	Ⓞ Ⓦ (OP)	Ⓐ Ⓑ
			67		77

36	8 Who	9 To Whom	10 What	12 How	
Ⓡ	Ⓣ Ⓐ Ⓥ	Ⓣ Ⓐ Ⓥ	① ② ③ ④ ⑤	Ⓗ Ⓤ Ⓝ Ⓣ	14
	Ⓒ Ⓓ Ⓩ	Ⓒ Ⓓ Ⓩ	⑥ ⑦ ⑧ ⑨ ⑩	Ⓠ Ⓖ Ⓟ	17
Ⓒ	Ⓢ Ⓛ (AN) Ⓜ	Ⓢ Ⓛ (AN) Ⓜ	⑪ ⑫ (NV) Ⓧ	Ⓞ Ⓦ (OP)	Ⓐ Ⓑ
			11		21

37	22 Who	23 To Whom	24 What	26 How	
Ⓡ	Ⓣ Ⓐ Ⓥ	Ⓣ Ⓐ Ⓥ	① ② ③ ④ ⑤	Ⓗ Ⓤ Ⓝ Ⓣ	28
	Ⓒ Ⓓ Ⓩ	Ⓒ Ⓓ Ⓩ	⑥ ⑦ ⑧ ⑨ ⑩	Ⓠ Ⓖ Ⓟ	31
Ⓒ	Ⓢ Ⓛ (AN) Ⓜ	Ⓢ Ⓛ (AN) Ⓜ	⑪ ⑫ (NV) Ⓧ	Ⓞ Ⓦ (OP)	Ⓐ Ⓑ
			25		35

38	36 Who	37 To Whom	38 What	40 How	
Ⓡ	Ⓣ Ⓐ Ⓥ	Ⓣ Ⓐ Ⓥ	① ② ③ ④ ⑤	Ⓗ Ⓤ Ⓝ Ⓣ	42
	Ⓒ Ⓓ Ⓩ	Ⓒ Ⓓ Ⓩ	⑥ ⑦ ⑧ ⑨ ⑩	Ⓠ Ⓖ Ⓟ	45
Ⓒ	Ⓢ Ⓛ (AN) Ⓜ	Ⓢ Ⓛ (AN) Ⓜ	⑪ ⑫ (NV) Ⓧ	Ⓞ Ⓦ (OP)	Ⓐ Ⓑ
			39		49

39	50 Who	51 To Whom	52 What	54 How	
Ⓡ	Ⓣ Ⓐ Ⓥ	Ⓣ Ⓐ Ⓥ	① ② ③ ④ ⑤	Ⓗ Ⓤ Ⓝ Ⓣ	56
	Ⓒ Ⓓ Ⓩ	Ⓒ Ⓓ Ⓩ	⑥ ⑦ ⑧ ⑨ ⑩	Ⓠ Ⓖ Ⓟ	59
Ⓒ	Ⓢ Ⓛ (AN) Ⓜ	Ⓢ Ⓛ (AN) Ⓜ	⑪ ⑫ (NV) Ⓧ	Ⓞ Ⓦ (OP)	Ⓐ Ⓑ
			53		63

40	64 Who	65 To Whom	66 What	68 How	
Ⓡ	Ⓣ Ⓐ Ⓥ	Ⓣ Ⓐ Ⓥ	① ② ③ ④ ⑤	Ⓗ Ⓤ Ⓝ Ⓣ	70
	Ⓒ Ⓓ Ⓩ	Ⓒ Ⓓ Ⓩ	⑥ ⑦ ⑧ ⑨ ⑩	Ⓠ Ⓖ Ⓟ	73
Ⓒ	Ⓢ Ⓛ (AN) Ⓜ	Ⓢ Ⓛ (AN) Ⓜ	⑪ ⑫ (NV) Ⓧ	Ⓞ Ⓦ (OP)	Ⓐ Ⓑ
			67		77

41	8 Who	9 To Whom	10 What	12 How	
Ⓡ	Ⓣ Ⓐ Ⓥ	Ⓣ Ⓐ Ⓥ	① ② ③ ④ ⑤	Ⓗ Ⓤ Ⓝ Ⓣ	14
	Ⓒ Ⓓ ②	Ⓒ Ⓓ ②	⑥ ⑦ ⑧ ⑨ ⑩	Ⓠ Ⓖ Ⓟ	17
Ⓒ	Ⓢ Ⓛ (AN) Ⓜ	Ⓢ Ⓛ (AN) Ⓜ	⑪ ⑫ (NV) ⓧ	Ⓞ Ⓦ (UP)	Ⓐ Ⓑ
			11		21

42	22 Who	23 To Whom	24 What	26 How	
Ⓡ	Ⓣ Ⓐ Ⓥ	Ⓣ Ⓐ Ⓥ	① ② ③ ④ ⑤	Ⓗ Ⓤ Ⓝ Ⓣ	28
	Ⓒ Ⓓ ②	Ⓒ Ⓓ ②	⑥ ⑦ ⑧ ⑨ ⑩	Ⓠ Ⓖ Ⓟ	31
Ⓒ	Ⓢ Ⓛ (AN) Ⓜ	Ⓢ Ⓛ (AN) Ⓜ	⑪ ⑫ (NV) ⓧ	Ⓞ Ⓦ (UP)	Ⓐ Ⓑ
			25		35

43	36 Who	37 To Whom	38 What	40 How	
Ⓡ	Ⓣ Ⓐ Ⓥ	Ⓣ Ⓐ Ⓥ	① ② ③ ④ ⑤	Ⓗ Ⓤ Ⓝ Ⓣ	42
	Ⓒ Ⓓ ②	Ⓒ Ⓓ ②	⑥ ⑦ ⑧ ⑨ ⑩	Ⓠ Ⓖ Ⓟ	45
Ⓒ	Ⓢ Ⓛ (AN) Ⓜ	Ⓢ Ⓛ (AN) Ⓜ	⑪ ⑫ (NV) ⓧ	Ⓞ Ⓦ (UP)	Ⓐ Ⓑ
			39		49

44	50 Who	51 To Whom	52 What	54 How	
Ⓡ	Ⓣ Ⓐ Ⓥ	Ⓣ Ⓐ Ⓥ	① ② ③ ④ ⑤	Ⓗ Ⓤ Ⓝ Ⓣ	56
	Ⓒ Ⓓ ②	Ⓒ Ⓓ ②	⑥ ⑦ ⑧ ⑨ ⑩	Ⓠ Ⓖ Ⓟ	59
Ⓒ	Ⓢ Ⓛ (AN) Ⓜ	Ⓢ Ⓛ (AN) Ⓜ	⑪ ⑫ (NV) ⓧ	Ⓞ Ⓦ (UP)	Ⓐ Ⓑ
			53		63

45	64 Who	65 To Whom	66 What	68 How	
Ⓡ	Ⓣ Ⓐ Ⓥ	Ⓣ Ⓐ Ⓥ	① ② ③ ④ ⑤	Ⓗ Ⓤ Ⓝ Ⓣ	70
	Ⓒ Ⓓ ②	Ⓒ Ⓓ ②	⑥ ⑦ ⑧ ⑨ ⑩	Ⓠ Ⓖ Ⓟ	73
Ⓒ	Ⓢ Ⓛ (AN) Ⓜ	Ⓢ Ⓛ (AN) Ⓜ	⑪ ⑫ (NV) ⓧ	Ⓞ Ⓦ (UP)	Ⓐ Ⓑ
			67		77

46	8 Who	9 To Whom	10 What	12 How	
Ⓡ	Ⓣ Ⓐ Ⓥ	Ⓣ Ⓐ Ⓥ	① ② ③ ④ ⑤	Ⓗ Ⓤ Ⓝ Ⓣ	14
	Ⓒ Ⓓ ②	Ⓒ Ⓓ ②	⑥ ⑦ ⑧ ⑨ ⑩	Ⓠ Ⓖ Ⓟ	17
Ⓒ	Ⓢ Ⓛ (AN) Ⓜ	Ⓢ Ⓛ (AN) Ⓜ	⑪ ⑫ (NV) ⓧ	Ⓞ Ⓦ (UP)	Ⓐ Ⓑ
			11		21

47	22 Who	23 To Whom	24 What	26 How	
Ⓡ	Ⓣ Ⓐ Ⓥ	Ⓣ Ⓐ Ⓥ	① ② ③ ④ ⑤	Ⓗ Ⓤ Ⓝ Ⓣ	28
	Ⓒ Ⓓ ②	Ⓒ Ⓓ ②	⑥ ⑦ ⑧ ⑨ ⑩	Ⓠ Ⓖ Ⓟ	31
Ⓒ	Ⓢ Ⓛ (AN) Ⓜ	Ⓢ Ⓛ (AN) Ⓜ	⑪ ⑫ (NV) ⓧ	Ⓞ Ⓦ (UP)	Ⓐ Ⓑ
			25		35

48	36 Who	37 To Whom	38 What	40 How	
Ⓡ	Ⓣ Ⓐ Ⓥ	Ⓣ Ⓐ Ⓥ	① ② ③ ④ ⑤	Ⓗ Ⓤ Ⓝ Ⓣ	42
	Ⓒ Ⓓ ②	Ⓒ Ⓓ ②	⑥ ⑦ ⑧ ⑨ ⑩	Ⓠ Ⓖ Ⓟ	45
Ⓒ	Ⓢ Ⓛ (AN) Ⓜ	Ⓢ Ⓛ (AN) Ⓜ	⑪ ⑫ (NV) ⓧ	Ⓞ Ⓦ (UP)	Ⓐ Ⓑ
			39		49

49	50 Who	51 To Whom	52 What	54 How	
Ⓡ	Ⓣ Ⓐ Ⓥ	Ⓣ Ⓐ Ⓥ	① ② ③ ④ ⑤	Ⓗ Ⓤ Ⓝ Ⓣ	56
	Ⓒ Ⓓ ②	Ⓒ Ⓓ ②	⑥ ⑦ ⑧ ⑨ ⑩	Ⓠ Ⓖ Ⓟ	59
Ⓒ	Ⓢ Ⓛ (AN) Ⓜ	Ⓢ Ⓛ (AN) Ⓜ	⑪ ⑫ (NV) ⓧ	Ⓞ Ⓦ (UP)	Ⓐ Ⓑ
			53		63

50	64 Who	65 To Whom	66 What	68 How	
Ⓡ	Ⓣ Ⓐ Ⓥ	Ⓣ Ⓐ Ⓥ	① ② ③ ④ ⑤	Ⓗ Ⓤ Ⓝ Ⓣ	70
	Ⓒ Ⓓ ②	Ⓒ Ⓓ ②	⑥ ⑦ ⑧ ⑨ ⑩	Ⓠ Ⓖ Ⓟ	73
Ⓒ	Ⓢ Ⓛ (AN) Ⓜ	Ⓢ Ⓛ (AN) Ⓜ	⑪ ⑫ (NV) ⓧ	Ⓞ Ⓦ (UP)	Ⓐ Ⓑ
			67		77

51	8 Who	9 To Whom	10 What	12 How	
Ⓡ	Ⓣ Ⓐ Ⓥ	Ⓣ Ⓐ Ⓥ	① ② ③ ④ ⑤	Ⓗ Ⓤ Ⓝ Ⓣ	14
	Ⓒ Ⓓ ②	Ⓒ Ⓓ ②	⑥ ⑦ ⑧ ⑨ ⑩	Ⓠ Ⓖ Ⓟ	17
Ⓒ	Ⓢ Ⓛ (AN) Ⓜ	Ⓢ Ⓛ (AN) Ⓜ	⑪ ⑫ (NV) ⓧ	Ⓞ Ⓦ (UP)	Ⓐ Ⓑ
			11		21

52	22 Who	23 To Whom	24 What	26 How	
Ⓡ	Ⓣ Ⓐ Ⓥ	Ⓣ Ⓐ Ⓥ	① ② ③ ④ ⑤	Ⓗ Ⓤ Ⓝ Ⓣ	28
	Ⓒ Ⓓ ②	Ⓒ Ⓓ ②	⑥ ⑦ ⑧ ⑨ ⑩	Ⓠ Ⓖ Ⓟ	31
Ⓒ	Ⓢ Ⓛ (AN) Ⓜ	Ⓢ Ⓛ (AN) Ⓜ	⑪ ⑫ (NV) ⓧ	Ⓞ Ⓦ (UP)	Ⓐ Ⓑ
			25		35

53	36 Who	37 To Whom	38 What	40 How	
Ⓡ	Ⓣ Ⓐ Ⓥ	Ⓣ Ⓐ Ⓥ	① ② ③ ④ ⑤	Ⓗ Ⓤ Ⓝ Ⓣ	42
	Ⓒ Ⓓ ②	Ⓒ Ⓓ ②	⑥ ⑦ ⑧ ⑨ ⑩	Ⓠ Ⓖ Ⓟ	45
Ⓒ	Ⓢ Ⓛ (AN) Ⓜ	Ⓢ Ⓛ (AN) Ⓜ	⑪ ⑫ (NV) ⓧ	Ⓞ Ⓦ (UP)	Ⓐ Ⓑ
			39		49

54	50 Who	51 To Whom	52 What	54 How	
Ⓡ	Ⓣ Ⓐ Ⓥ	Ⓣ Ⓐ Ⓥ	① ② ③ ④ ⑤	Ⓗ Ⓤ Ⓝ Ⓣ	56
	Ⓒ Ⓓ ②	Ⓒ Ⓓ ②	⑥ ⑦ ⑧ ⑨ ⑩	Ⓠ Ⓖ Ⓟ	59
Ⓒ	Ⓢ Ⓛ (AN) Ⓜ	Ⓢ Ⓛ (AN) Ⓜ	⑪ ⑫ (NV) ⓧ	Ⓞ Ⓦ (UP)	Ⓐ Ⓑ
			53		63

55	64 Who	65 To Whom	66 What	68 How	
Ⓡ	Ⓣ Ⓐ Ⓥ	Ⓣ Ⓐ Ⓥ	① ② ③ ④ ⑤	Ⓗ Ⓤ Ⓝ Ⓣ	70
	Ⓒ Ⓓ ②	Ⓒ Ⓓ ②	⑥ ⑦ ⑧ ⑨ ⑩	Ⓠ Ⓖ Ⓟ	73
Ⓒ	Ⓢ Ⓛ (AN) Ⓜ	Ⓢ Ⓛ (AN) Ⓜ	⑪ ⑫ (NV) ⓧ	Ⓞ Ⓦ (UP)	Ⓐ Ⓑ
			67		77

56	8 Who	9 To Whom	10 What	12 How	
Ⓡ	Ⓣ Ⓐ Ⓥ	Ⓣ Ⓐ Ⓥ	① ② ③ ④ ⑤	Ⓗ Ⓤ Ⓝ Ⓣ	14
	Ⓒ Ⓓ ②	Ⓒ Ⓓ ②	⑥ ⑦ ⑧ ⑨ ⑩	Ⓠ Ⓖ Ⓟ	17
Ⓒ	Ⓢ Ⓛ (AN) Ⓜ	Ⓢ Ⓛ (AN) Ⓜ	⑪ ⑫ (NV) ⓧ	Ⓞ Ⓦ (UP)	Ⓐ Ⓑ
			11		21

57	22 Who	23 To Whom	24 What	26 How	
Ⓡ	Ⓣ Ⓐ Ⓥ	Ⓣ Ⓐ Ⓥ	① ② ③ ④ ⑤	Ⓗ Ⓤ Ⓝ Ⓣ	28
	Ⓒ Ⓓ ②	Ⓒ Ⓓ ②	⑥ ⑦ ⑧ ⑨ ⑩	Ⓠ Ⓖ Ⓟ	31
Ⓒ	Ⓢ Ⓛ (AN) Ⓜ	Ⓢ Ⓛ (AN) Ⓜ	⑪ ⑫ (NV) ⓧ	Ⓞ Ⓦ (UP)	Ⓐ Ⓑ
			25		35

58	36 Who	37 To Whom	38 What	40 How	
Ⓡ	Ⓣ Ⓐ Ⓥ	Ⓣ Ⓐ Ⓥ	① ② ③ ④ ⑤	Ⓗ Ⓤ Ⓝ Ⓣ	42
	Ⓒ Ⓓ ②	Ⓒ Ⓓ ②	⑥ ⑦ ⑧ ⑨ ⑩	Ⓠ Ⓖ Ⓟ	45
Ⓒ	Ⓢ Ⓛ (AN) Ⓜ	Ⓢ Ⓛ (AN) Ⓜ	⑪ ⑫ (NV) ⓧ	Ⓞ Ⓦ (UP)	Ⓐ Ⓑ
			39		49

59	50 Who	51 To Whom	52 What	54 How	
Ⓡ	Ⓣ Ⓐ Ⓥ	Ⓣ Ⓐ Ⓥ	① ② ③ ④ ⑤	Ⓗ Ⓤ Ⓝ Ⓣ	56
Ⓢ	Ⓒ Ⓓ ②	Ⓒ Ⓓ ②	⑥ ⑦ ⑧ ⑨ ⑩	Ⓠ Ⓖ Ⓟ	59
Ⓒ	Ⓢ Ⓛ (AN) Ⓜ	Ⓢ Ⓛ (AN) Ⓜ	⑪ ⑫ (NV) ⓧ	Ⓞ Ⓦ (UP)	Ⓐ Ⓑ
			53		63

60	64 Who	65 To Whom	66 What	68 How	
Ⓡ	Ⓣ Ⓐ Ⓥ	Ⓣ Ⓐ Ⓥ	① ② ③ ④ ⑤	Ⓗ Ⓤ Ⓝ Ⓣ	70
	Ⓒ Ⓓ ②	Ⓒ Ⓓ ②	⑥ ⑦ ⑧ ⑨ ⑩	Ⓠ Ⓖ Ⓟ	73
Ⓒ	Ⓢ Ⓛ (AN) Ⓜ	Ⓢ Ⓛ (AN) Ⓜ	⑪ ⑫ (NV) ⓧ	Ⓞ Ⓦ (UP)	Ⓐ Ⓑ
			67		77

61	8 Who	9 To Whom	10 What	12 How	
R	T A V	T A V	1 2 3 4 5	H U N T	14
	C D 2	C D 2	6 7 8 9 10	Q G P	17
C	S L AN M	S L AN M	11 12 NV X	O W DP A B	
			11	21	

62	22 Who	23 To Whom	24 What	26 How	
R	T A V	T A V	1 2 3 4 5	H U N T	28
	C D 2	C D 2	6 7 8 9 10	Q G P	31
C	S L AN M	S L AN M	11 12 NV X	O W DP A B	
			25	35	

63	36 Who	37 To Whom	38 What	40 How	
R	T A V	T A V	1 2 3 4 5	H U N T	42
	C D 2	C D 2	6 7 8 9 10	Q G P	45
C	S L AN M	S L AN M	11 12 NV X	O W DP A B	
			39	49	

64	50 Who	51 To Whom	52 What	54 How	
R	T A V	T A V	1 2 3 4 5	H U N T	56
	C D 2	C D 2	6 7 8 9 10	Q G P	59
C	S L AN M	S L AN M	11 12 NV X	O W DP A B	
			53	63	

65	64 Who	65 To Whom	66 What	68 How	
R	T A V	T A V	1 2 3 4 5	H U N T	70
	C D 2	C D 2	6 7 8 9 10	Q G P	73
C	S L AN M	S L AN M	11 12 NV X	O W DP A B	
			67	77	

66	8 Who	9 To Whom	10 What	12 How	
R	T A V	T A V	1 2 3 4 5	H U N T	14
	C D 2	C D 2	6 7 8 9 10	Q G P	17
C	S L AN M	S L AN M	11 12 NV X	O W DP A B	
			11	21	

67	22 Who	23 To Whom	24 What	26 How	
R	T A V	T A V	1 2 3 4 5	H U N T	26
	C D 2	C D 2	6 7 8 9 10	Q G P	31
C	S L AN M	S L AN M	11 12 NV X	O W DP A B	
			25	35	

68	36 Who	37 To Whom	38 What	40 How	
R	T A V	T A V	1 2 3 4 5	H U N T	42
	C D 2	C D 2	6 7 8 9 10	Q G P	45
C	S L AN M	S L AN M	11 12 NV X	O W DP A B	
			39	49	

69	50 Who	51 To Whom	52 What	54 How	
R	T A V	T A V	1 2 3 4 5	H U N T	56
	C D 2	C D 2	6 7 8 9 10	Q G P	59
C	S L AN M	S L AN M	11 12 NV X	O W DP A B	
			53	63	

70	64 Who	65 To Whom	66 What	68 How	
R	T A V	T A V	1 2 3 4 5	H U N T	70
	C D 2	C D 2	6 7 8 9 10	Q G P	73
C	S L AN M	S L AN M	11 12 NV X	O W DP A B	
			67	77	

71	8 Who	9 To Whom	10 What	12 How	
R	T A V	T A V	1 2 3 4 5	H U N T	14
	C D 2	C D 2	6 7 8 9 10	Q G P	17
C	S L AN M	S L AN M	11 12 NV X	O W DP A B	
			11	21	

72	22 Who	23 To Whom	24 What	26 How	
R	T A V	T A V	1 2 3 4 5	H U N T	28
	C D 2	C D 2	6 7 8 9 10	Q G P	31
C	S L AN M	S L AN M	11 12 NV X	O W DP A B	
			25	35	

73	36 Who	37 To Whom	38 What	40 How	
R	T A V	T A V	1 2 3 4 5	H U N T	42
	C D 2	C D 2	6 7 8 9 10	Q G P	45
C	S L AN M	S L AN M	11 12 NV X	O W DP A B	
			39	49	

74	50 Who	51 To Whom	52 What	54 How	
R	T A V	T A V	1 2 3 4 5	H U N T	56
	C D 2	C D 2	6 7 8 9 10	Q G P	59
C	S L AN M	S L AN M	11 12 NV X	O W DP A B	
			53	63	

75	64 Who	65 To Whom	66 What	68 How	
R	T A V	T A V	1 2 3 4 5	H U N T	70
	C D 2	C D 2	6 7 8 9 10	Q G P	73
C	S L AN M	S L AN M	11 12 NV X	O W DP A B	
			67	77	

TIME STOPPED

Hour	Minute	
8 9 10 11 12	0 1 2	0 1 2 3 4
1 2 3 4 5	3 4 5	5 6 7 8 9

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TEACHER QUESTIONNAIRE

NAME: ____________________

SCHOOL: ____________________

SCHOOL DISTRICT: ____________________

This Questionnaire seeks information about your teaching and your background. We've tried to keep the Questionnaire short because we know you are busy. Thanks for your cooperation.

TEACHER QUESTIONNAIRE

1. For each of the activities listed below, please indicate approximately how many hours per week you participate in that activity:

Classroom Teaching	Hours Per Week	
Reading, spelling, language arts	____	(7, 8)
Arithmetic	____	(9, 10)
Finding out about people and how they live	____	(11, 12
Learning about the natural world (e.g., plants, sound, animals)	____	(13, 14
Group time, sharing, singing, dancing	____	(15, 16
Art, crafts, constructing things	____	(17, 18)
Other classroom activities (specify)	____	(19, 20
____________________		(21, 22)
____________________		(23, 24
____________________		
____________________		

Other School-Based Activities	Hours Per Week	
Lesson planning by yourself	____	(25, 26)
Lesson planning as member of a group	____	(27, 28
Lesson materials development or preparation	____	(29, 30,
Monitoring of area or activity	____	[illegible]
Free time, lunch breaks	____	(33, 34
Other school-based activities (specify)	____	(35, 36)
____________________		(37, 38
____________________		
____________________		
____________________		

Community-Based Activities	Hours Per Week	
(All community activities such as working at community agency, attending school board meetings, working with parents.)	____	(39, 40)

2. The following list gives kinds of choices that pupils may have in their classrooms. Please read the list and indicate to what extent your pupils are permitted to make each of the choices.

Choices That Pupils May Have	Pupils almost always have a choice	Pupils generally have a choice	Pupils occasionally have a choice	Pupils never have a choice	
	4	3	2	1	
a. To what extent can pupils choose subject matter.					(41)
b. To what extent can pupils choose the learning activity.					(42)
c. To what extent can pupils choose time for beginning and completing work.					(43)
d. To what extent can pupils choose to work alone or in a group.					(44)

Please rate how important you view the objective of bringing about educational change within your school.

Very important	4	(45)
Somewhat important	3	
Not very important	2	
Not at all important	1	

Please indicate how much influence you feel you have in bringing about educational change within your school.

A great deal	4	(46)
Some	3	
Not very much	2	
None	1	

Please indicate below the extent to which you have introduced into your classroom materials that are culturally relevant to the pupils but that were not available in the school before you brought them. That is, we are interested in culturally relevant materials that you personally introduced.

I have introduced a great deal of culturally relevant materials.	4	(47)
I have introduced some materials that were culturally relevant.	3	
I have introduced a small amount of culturally relevant materials.	2	
I have not introduced any culturally relevant materials.	1	

6. Listed below are ways in which you may have had contacts with parents during this school year. Please indicate in the "Frequency" columns how often you made each of these contacts. In the "Initiated By" columns, please indicate whether the contact was primarily initiated by you or by the parent.

Contacts	Frequency			Initiated By		
	None	1-2 Times	3 or More	Parent 1	Teacher 2	
a. School visit (open house, PTA meeting, etc.)						(48, 49)
b. Classroom visit						(50, 51)
c. Telephone conversation						(52, 53)
d. Teacher-parent conference						(54, 55)
e. Home visit						(56, 57)
f. After school or weekend activity (recreation, field trips)						(58, 59)

7. Have you been able to utilize community resources in your teaching? (CHECK (✓) YES OR NO FOR EACH ITEM.)

	Yes 1	No 2	
a. Social services agencies--probation, welfare, police, etc.			(60)
b. Business enterprises--stores, industry, restaurants, etc.			(61)
c. Medical professionals--doctors, dentists, mental health			(62)
d. Other (specify) ______________________________ ______________________________			(63)

②	1	2	3	4	5	6

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8. Listed below are some factors that may determine wheter or not pupils have difficulty learning to read. That is, some teachers have one opinion as to difficulties that students have in learning to read; other teachers have other opinions. For each factor listed, please give your opinion of whether you agree or disagree that this is likely a factor in reading difficulties. (Note: we are not seeking right or wrong answers; only your opinion.)

	Strongly Agree	Agree	Disagree	Strongly Disagree	
Failure in learning to read well is usually traceable to:	1	2	3	4	
a. How carefully the student works.					(7)
b. How much creativity the teacher has.					(8)
c. How much confidence the student has in himself.					(9)
d. Whether the teacher likes the student.					(10)
e. How difficult the reading material is.					(11)
f. The ability of the teacher to communicate with her students.					(12)
g. How fortunate the student is in general.					(13)
h. How alert the student is during reading instruction.					(14)
i. How much teacher preparation goes into a reading lesson.					(15)
j. How much the student cares about learning to read.					(16)
k. The socioeconomic background of the student.					(17)
l. How much competency the teacher has.					(18)
m. The ability of the teacher to individualize instruction.					(19)
n. Whether the student's parents read at home.					(20)
o. How much time the student spends in working on reading.					(21)
p. Whether the student is a boy or a girl.					(22)
q. Whether the student's parent(s) belong to an ethnic group that is verbally oriented.					(23)
r. How much academic ability the student has.					(24)

EXPLANATIONS OF POVERTY

9. Listed below are some reasons that are often given for why people are poor. For each reason listed, please rate how important you think it is in causing poverty by placing a check (✓) in the appropriate column. (Note: be sure to give only your own opinions.)

		very important	somewhat important	not important	
		3	2	1	
a.	Lack of thrift and proper money management by poor people				(25)
b.	Lack of effort by the poor themselves				(26)
c.	Lack of ability and talent among poor people				(27)
d.	Loose morals and drunkenness				(28)
e.	Sickness and physical handicaps				(29)
f.	Low wages in some business and industries				(30)
g.	Failure of society to provide good schools for many Americans				(31)
h.	Prejudice and discrimination against poor people				(32)
i.	Failure of private industry to provide enough jobs				(33)
j.	Being taken advantage of by rich people				(34)
k.	Just bad luck				(35)

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10. Please estimate the percentage of pupils who come from families earning less than $6,000. Estimate this percentage for all pupils at your school and for pupils you teach who were tested in this study last fall.

For all pupils in the school: ____ ____% (36, 37)

For pupils I teach who were tested in this study last fall: ____ ____% (38, 39)

11. How often do you receive curriculum materials and ideas about teaching from other staff at this school?

Almost daily	4	(40)
About once a week	3	
About once or twice a month	2	
Less than once a month or never	1	

12. To what extent are your views similar to or different from those of other teachers and the principals on the following?

	1 Very Similar	2 Similar	3 Different	4 Very Different	
a. Importance of reading for children					(41)
b. Importance of strict discipline for children					(42)
c. Importance of ethnic studies for children					(43)
d. Importance of rapport with parents					(44)
e. Importance of pupil involvement in decisions about instruction					(45)

13. Please indicate your opinion about each statement below:

	1 Strongly Agree	2 Agree	3 Disagree	4 Strongly Disagree	
a. I am just a cog in the wheel at this school.					(46)
b. I don't feel close to other teachers at this school.					(47)

THE PIERS-HARRIS

CHILDREN'S SELF CONCEPT SCALE

(The Way I Feel About Myself)

by

Ellen V. Piers, Ph.D.

and

Dale B. Harris, Ph.D.

Published by

Counselor Recordings and Tests

BOX 6184 ACKLEN STATION NASHVILLE, TENNESSEE 37212

THE WAY I FEEL ABOUT MYSELF

NAME . . . .

AGE . . . . GIRL OR BOY . . . .

GRADE . . . . SCHOOL . . . .

DATE . . . .

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Here are a set of statements. Some of them are true of you and so you will circle the yes. Some are not true of you and so you will circle the no. Answer every question even if some are hard to decide, but do not circle both yes and no. Remember, circle the yes if the statement is generally like you, or circle the no if the statement is generally not like you. There are no right or wrong answers. Only you can tell us how you feel about yourself, so we hope you will mark the way you really feel inside.

1. My classmates make fun of me . . . . yes no
2. I am a happy person . . . . yes no
3. It is hard for me to make friends . . . . yes no
4. I am often sad . . . . yes no
5. I am smart . . . . yes no
6. I am shy . . . . yes no
7. I get nervous when the teacher calls on me . . . . yes no
8. My looks bother me . . . . yes no
9. When I grow up, I will be an important person . . . . yes no
10. I get worried when we have tests in school. . . . . yes no
11. I am unpopular . . . . yes no
12. I am well behaved in school . . . . yes no
13. It is usually my fault when something goes wrong . . . . yes no
14. I cause trouble to my family . . . . yes no
15. I am strong . . . . yes no
16. I have good ideas . . . . yes no
17. I am an important member of my family . . . . yes no
18. I usually want my own way . . . . yes no
19. I am good at making things with my hands . . . . yes no
20. I give up easily . . . . yes no

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21. I am good in my school work . . . . yes no
22. I do many bad things . . . . yes no
23. I can draw well . . . . yes no
24. I am good in music . . . . yes no
25. I behave badly at home . . . . yes no
26. I am slow in finishing my school work . . . . yes no
27. I am an important member of my class . . . . yes no
28. I am nervous . . . . yes no
29. I have pretty eyes . . . . yes no
30. I can give a good report in front of the class . . . . yes no
31. In school I am a dreamer . . . . yes no
32. I pick on my brother(s) and sister(s) . . . . yes no
33. My friends like my ideas . . . . yes no
34. I often get into trouble . . . . yes no
35. I am obedient at home . . . . yes no
36. I am lucky . . . . yes no
37. I worry a lot . . . . yes no
38. My parents expect too much of me . . . . yes no
39. I like being the way I am . . . . yes no
40. I feel left out of things . . . . yes no

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41. I have nice hair . . . . yes no

42. I often volunteer in school . . . . yes no

43. I wish I were different . . . . yes no

44. I sleep well at night . . . . yes no

45. I hate school . . . . yes no

46. I am among the last to be chosen for games . . . . yes no

47. I am sick a lot . . . . yes no

48. I am often mean to other people . . . . yes no

49. My classmates in school think I have good ideas . . . . yes no

50. I am unhappy . . . . yes no

51. I have many friends . . . . yes no

52. I am cheerful . . . . yes no

53. I am dumb about most things . . . . yes no

54. I am good looking . . . . yes no

55. I have lots of pep . . . . yes no

56. I get into a lot of fights . . . . yes no

57. I am popular with boys . . . . yes no

58. People pick on me . . . . yes no

59. My family is disappointed in me . . . . yes no

60. I have a pleasant face . . . . yes no

61. When I try to make something, everything seems to go wrong . . . . . yes no

62. I am picked on at home . . . . . yes no

63. I am a leader in games and sports . . . . . yes no

64. I am clumsy . . . . . yes no

65. In games and sports, I watch instead of play . . . . . yes no

66. I forget what I learn . . . . . yes no

67. I am easy to get along with . . . . . yes no

68. I lose my temper easily . . . . . yes no

69. I am popular with girls . . . . . yes no

70. I am a good reader . . . . . yes no

71. I would rather work alone than with a group . . . . . yes no

72. I like my brother (sister) . . . . . yes no

73. I have a good figure . . . . . yes no

74. I am often afraid . . . . . yes no

75. I am always dropping or breaking things . . . . . yes no

76. I can be trusted . . . . . yes no

77. I am different from other people . . . . . yes no

78. I think bad thoughts . . . . . yes no

79. I cry easily . . . . . yes no

80. I am a good person . . . . . yes no

Score: ______